# **OWNER'S MANUAL**



# HI-CAP 40 GRAIN CLEANER



# DAVID MANUFACTURING CO.

1600 12th Street N.E., Mason City, Iowa USA 50401 641-424-7010

# WARRANTY for HI-CAP 40 GRAIN CLEANER

The guarantee is for one year from date of installation to be free of defects in material or workmanship when properly installed and operated in accordance with instructions in this booklet. Warranted parts will be exchanged F.O.B. Mason City, Iowa without charge to the user. Damage resulting from negligence voids the warranty. Warranty does not include labor, installation or delivery of replacement parts.

Electric motors are covered by the warranties of the respective manufacturers. Electric service centers are located in all regions. Consult your dealer.

The Warranty and liability of David Manufacturing Company, its distributors, dealers and agents is limited to replacement, without charge, of defective parts, as outlined above. DMC makes no other warranties, express or implied except as stated herein, and disclaims all obligations and liabilities other than specified.

The Manufacturer reserves the right to make changes in specifications or prices without incurring obligation on previously produced merchandise.



### EC DECLARATION OF CONFORMITY 2027319

David Manufacturing Company 1600 12th Street N.E. Mason City, Iowa 50401 USA

**Declares that:** 

Machine Name: Hi-Cap 40 Grain Cleaner

Machine Description/uses:

The primary function of the grain cleaner is to remove unwanted fines and large materials from grain by means of revolving screen cylinders and cones.

Conforms to the EC Directive 89/392/EEC, (amended by Council directive 91/368/EEC), the Machinery Directive, and in particular, the Essential Health and Safety Requirements that apply to it. Specifically to:

**Schedule 1: General Points** 

Signed,

Keith Braun for David Manufacturing Company



Hi-Cap Model	
Year Purchased	
Serial No	
Auger Size	

# LIMITED WARRANTY

The Hi-Cap Grain Cleaner is guaranteed for one drying season to be free of defects in materials or workmanship, when properly serviced and operated in accordance with the instructions. Warranted parts will be exchanged FOB Mason City, Iowa, USA, without charge to the user. Damage resulting from negligence voids the warranty. Warranty does not include labor, installation or the deliveryof the replacement parts.

Electric motors are covered by the warranties of the respective manufacturers. Electric service centers are locted in all regions. Consult your dealer.

The Hi-Cap Warranty, and the liability of David Manufacturing Company, its distributors, dealers and agents is limited to replacement, without charge, of defective parts, as outlined above. No other warranties, expressed or implied, shall apply in any circumstances.

The manufacturer reserves the right to make changes in specifications or prices wihtout incurring obligation on previously produced merchandise.

David Manufacturing Co. 1600 12th Street N.E. Mason City, Iowa 50401 USA 641-421-7010







# SAFETY INFORMATION PLEASE READ





WATCH FOR THIS SYMBOL! IT POINTS OUT IMPORTANT SAFETY PRECAUTIONS. IT MEANS, "ATTENTION --- BECOME ALERT! YOUR SAFETY IS INVOLVED!"

It is recommended that you review the entire contents of this manual, paying particular attention to items preceded by this symbol. FAILURE TO HEED THESE INSTRUCTIONS CAN RESULT IN PERSONAL INJURY!

#### OPERATOR QUALIFICATIONS



Operation of this farmstead equipment shall be limited to competent and experienced persons. In addition, anyone who will operate or work around power equipment must use good common sense. In order to be qualified, he must also know and meet all other requirements, such as:

- 1. Some regulations specify that no one under the age of 16 may operate power machinery. This includes farmstead equipment. It is your responsibility to know what these regulations are in your own area or situation.
- 2. Current OSHA regulations state in part: "At the time of initial assignment and at least annually thereafter, the employer shall instruct every employee in the safe operation and servicing of all equipment with which the employee is, or will be involved."\*
- 3. Unqualified persons are to stay out of the work area. The "Work Area" is defined as any area within the storage bins where this equipment is installed.
- 4. A person who has not read and understood all operating and safety instructions is not qualified to operate the machine.
- \*Federal Occupational Safety & Health Standards for Agriculture Subpart D, Section 1928.57 (a)(6).

# A CAUTION A

### Maintenance and Service

It is essential in undertaking any maintenance or servicing of the Grain Cleaner that a safe system of work is strictly followed. Failure to do so may result in a serious injury to the operator. Before carrying out any work on the Grain Cleaner, it is IMPORTANT to follow these steps:

Stop the Grain Cleaner and all other machines operating in the area.

Ensure the isolator switch is locked into the "off" position, with the only key in your possession.

Notice of Noise and Dust Hazard: The Grain Cleaner runs at noise levels below 70 db and should not present any problems.

A decal indicating the possibility of dust is attached to the machine. Dust may be created as a normal part of the cleaning function of the Grain Cleaner. Some residual dust may remain the air after the Cleaner has been turned "OFF." The level of dust will vary depending on the condition of the grain. Operators should assess the risk to themselves and others, as required in the EU under the control of Substances Hazardous to Health Regulations. They should then implement appropriate control measures to reduce the risks to health.



# A CAUTION A

## **OPERATION**

- 1. Read and understand the Owner's Manual.
- 2. Keep all safety shields in place.
- Do NOT wear loose-fitting clothes while working with equipment in operation.
- 4. Keep hands and feet away from moving parts. Be sure all people are clear of the equipment before start-up.
- 5. Disconnect all electrical power before servicing, adjusting, or lubricating the equipment. Ensure that the isolator switch is locked in the "OFF" position with the only key in your possession.
- 6. ALL electrical wiring should be in accordance of B57671:1992. Be sure equipment is properly grounded.
- 7. Only knowledgeable and trained personnel should operate this equipment.
- 8. Rotating drum grain cleaners are designed to remove both fine and large materials from grain. Contact DMC for recommendations for other materials and conditions.

# THE DECALS SHOWN ON THIS PAGE MUST BE DISPLAYED AS SHOWN

REPLACEMENTS ARE AVAILABLE UPON REQUEST

Write to: David Manufacturing Company

1600 12th Street N.E.

Mason City, Iowa 50401 USA

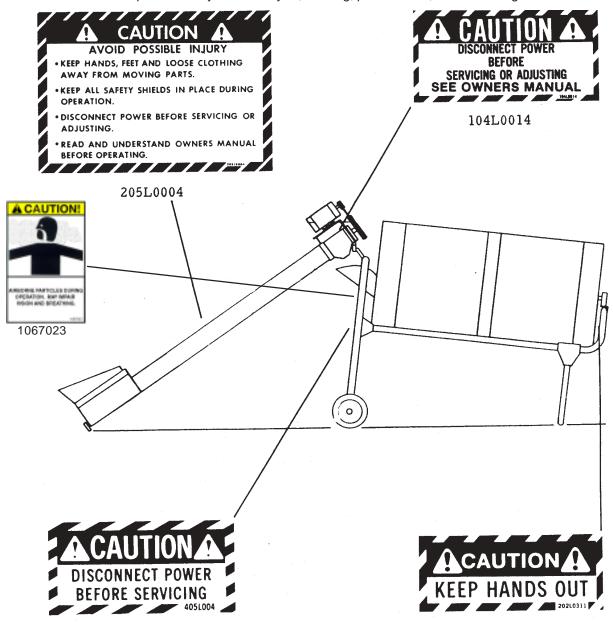
### Please note:

1. The decals on the page are NOT actual size.

405L004

2. Keep all decals wiped clean at all times.

3. All decals must be replaced if they are destroyed, missing, painted over, or can no longer be read.



### INTRODUCTION

Your Hi-Cap Grain Cleaner is a high quality machine built to give years of reliable service. With the wide range of screen sizes available, it will take care of all your screening needs. With its dual screening action it not only removes the "fines", chaff, etc., but also large trash such as cob particles, stalks and straw. The feed-in auger will operate in full half-circle for easy unloading of grain.

### SERVICE

Lubricate all grease fittings every 5000 bushels, or at least once every year. At the same time, check belt tensions and clean any accumulated trash out of the pulley grooves.

### **OPERATION**



As with all moving machinery, DO NOT stand close to the Hi-Cap Grain Cleaner while it is operating, and always stop it to make adjustments.

The cleaning drum should turn 27 revolutions per minute, and rotate clockwise when viewed from the feed-in end. The cleaner should run until empty before stopping. It is NOT advisable to leave grain in the cleaner or start the cleaner with a load of grain in it.

The Adjustable Baffle in the internal screen serves two purposes: first, to force the grain through the coarse screen close to the feed-in end to insure as much fine screening as possible, and secondly, to prevent grain from working to the far end and out through the large particle chute. It will be found that the baffle can be closer to the feed-in auger for dry grain than for wet. Observation of operation will reveal the need for adjustment to give most efficient cleaning. If the grain tends to build up in the internal screen, set the baffle plate farther toward the large particle chute end. Otherwise, keep it as close to the feed-in end as possible.

### **OPERATIONAL EQUIPMENT**

8" x 8' Auger 4" x 15' Trash Auger Steel Hopper for 4" Trash Auger Trash Pan 230 Volt, Single Phase Electrical Power



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# **CLEANER ASSEMBLY INSTRUCTIONS**

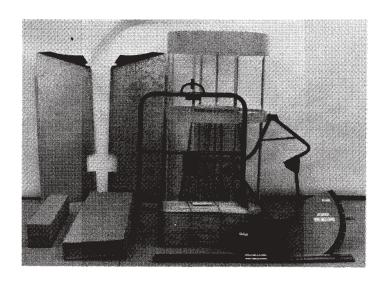
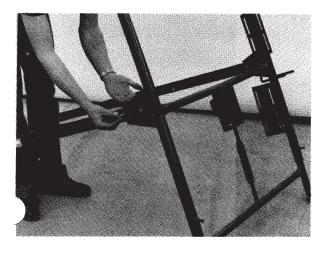


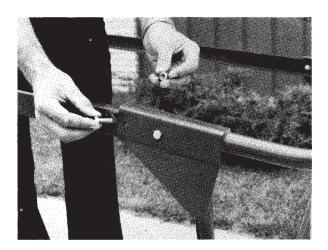
PHOTO 1.

- Step 1. The component parts necessary for the make-up of the completed screener are shown in Photo 1.
- Step 2. Using eight 3/8" x 1" hex head bolts, bolt the side rails on to the front and rear frame ends. Secure with 3/8" lock washers and nuts, as shown in <a href="Photos 2">Photos 2</a>, 3 and 4. Before tightening bolts, square side rails with front frame end.

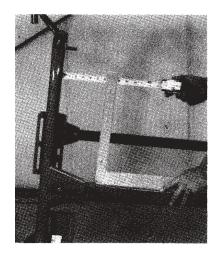
NOTE: If trash pan is to be installed, attach the two side panel frame brackets when attaching side rails. See Photo 5 and 6.

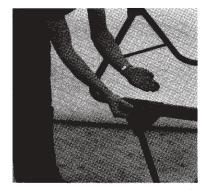






рното 3







рното 6

PHOTO 5

рното 4



Step 3. Put wheels on to axles as shown in  $\frac{\text{Photo 7.}}{\text{washers and 3/16"}}$  x 1" cotter keys.

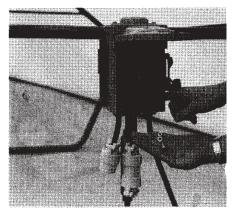
Place wheel on axle with the grease zerk on the outer side.

PHOTO 7

- Step 4. Mount switch box to front frame end.

  \* To attach, open switch box cover and bolt to switch mounting plate, using three 1/4" x 3/4" pan head bolts, lock washers and nuts.

  See Photo 8.
  - \* NOT provided by DMC



рното 8

Step 5. Using two 3/8" x 1-1/2" bolts, bolt dual bearing on the front frame bearing mount. See Photos 9 and 10. Fasten each bolt with 5/16" flat washer, 3/8" lock washer and nut. BE SURE the dual bearing is positioned as shown in Photo 10 with indentation up.

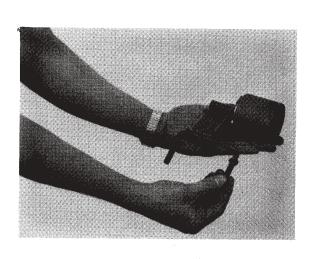




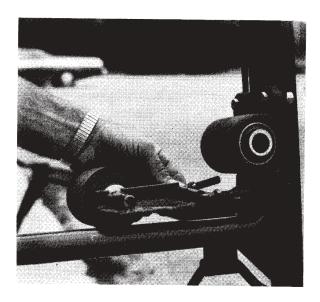
PHOTO 9

рното 10

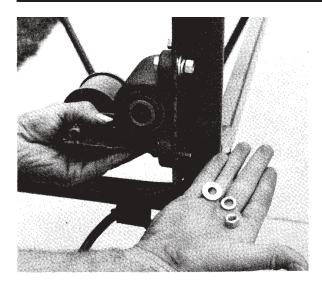
Step 6. Put the 3/8" pivot bolts into the drum belt tightener as shown in <a href="Photo 11">Photo 11</a> Next, put the pivot bolts through the lower half of the double bearing and the bearing plate, fasten with 5/16" flat washer, 3/8" lock washer and nut. Slide dual bearing to the top of the slotted holes and TIGHTEN TEMPORARILY. See Photos 11, 12 and 13.







рното 12



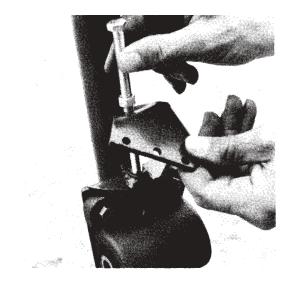
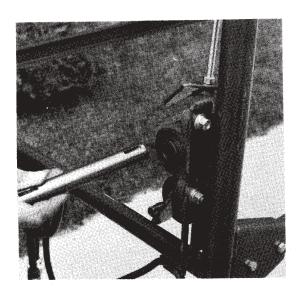


PHOTO 13 PHOTO 14

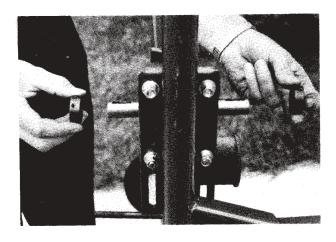
Step 7. Put tension spring bracket on to 3/8" x 5-1/2" bolt, with 3/8" nut, and turn into bearing plate as shown in Photo 14.



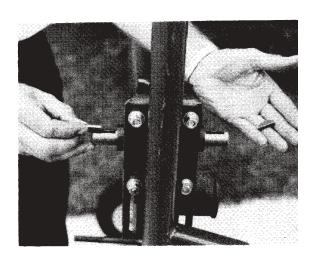
РНОТО 15

Step 8. Place the 7/8" x 7-3/8" shaft, (keyway both ends) into double bearing with an equal amount of shaft protruding from each end of dual bearing. See Photo 15.

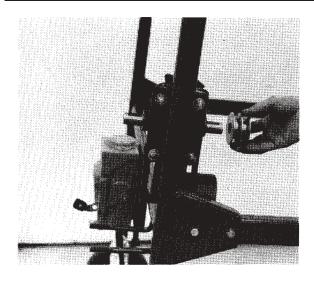
Next, put a locking collar on each end of shaft and lock. Tighten set screws. Last, place 1/2" moon keys into shaft. See Photos 16 and 17. Lock locking collar in direction of rotation.

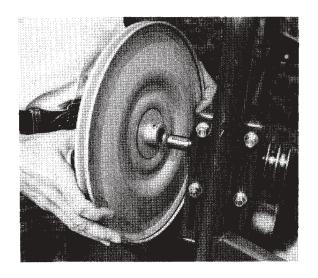


рното 16



рното 17

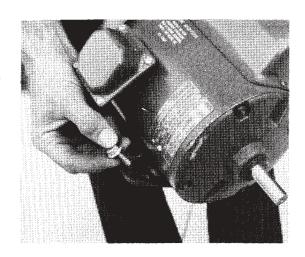


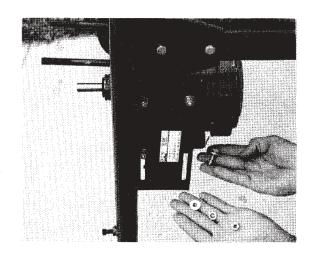


рното 18

рното 19

- Step 9. Place the 7/8" x 2-1/2" two-groove "A" section pulley on to the 7/8" shaft as shown in Photo 18. Position pulley so that it is flush with the outside end of the shaft. Tighten set screws firmly.
- Step 10. Slide the 14" pulley on to the 7/8" shaft, hub first. Position it tight against bearing locking collar. Tighten set screws firmly. See Photo 19.





рното 20

РНОТО 21

- Step 11. Bolt electric motor on motor mount on front frame, using four 5/16" x 1" bolts, eight 1/4" flat washers and four 5/16" lock washers and nuts. Slide motor to upper-most position in the slotted holes. See Photos 20 and 21.
- Step 12. Place straight key into motor shaft slot. Next, place 5/8" x 2-1/4" pulley on to motor shaft. Align with 14" pulley and tighten set screws. See Photo 22.

  At this time, put a 3/8" Romex connector into the motor junction box. Take loose wire from outlet box and wire motor as described on wiring diagram on inside cover plate of electric motor. For 115 volts, follow low voltage diagram; for 230 volt, follow high voltage diagram. Put motor belt (A-55) on motor pulley and 14" pulley. Adjust belt tension.

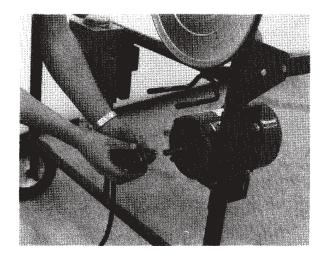
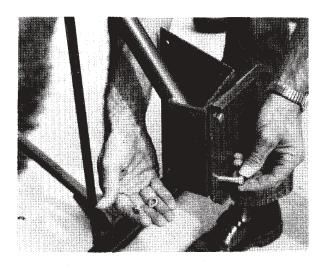


PHOTO 22



РНОТО 23



РНОТО 24

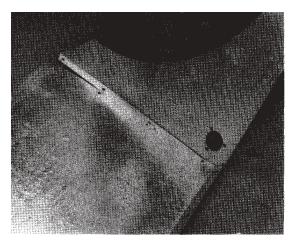
Step 13. Bolt drum bearing mount extension bracket and discharge shield bracket on to the rear frame end, using two 3/8" x 1-1/4" bolts, lock washers and nuts.

BE SURE frame end is bolted between bearing mount and shield bracket.

FOR OLD STYLE THREE-PIECE TRASH PAN, SEE SUPPLEMENT PAGE.

# CLEANERS WITHOUT TRASH PAN, ELIMINATE STEPS 14 - 19. GO DIRECTLY TO STEP 20.

- Step 14. Bolt one-half of the collector pan to the rear end panel, using three 1/4" x 1/2" pan head machine screws, and hex flange lock nuts. See Photo 25. Continue by bolting the other half of the collector pan on to the rear end panel, finish by bolting the two collector pan halves together at the bottom, using twelve 1/4" x 1/2" pan head screws, and hex flange lock nuts. See Photo 26.
- Step 15. Position four inch collector pan discharge auger in collector pan with flighting void directly over the collector pan hole. Bolt front collector pan panel into place with six 1/4" x 1/2" pan head screws and hex flange lock nuts. See Photo 27.
- Step 16. Install front and rear collector pan wooden bearings with six 5/16" x 3/4" carriage bolts, lock washers and hex nuts. See Photo 28.
- Step 17. Pull key-wayed end of collector pan auger forward. Place 1" machine bushing on to auger shaft and hold in position by driving a 3/16" x 1 1/2" spring pin through the shaft. Install the 3/16" x 1" woodruff key on the auger shaft and then position the 8" v-pulley with the hub out approximately 3/16" from the end of the shaft. See Photos 29 and 30.



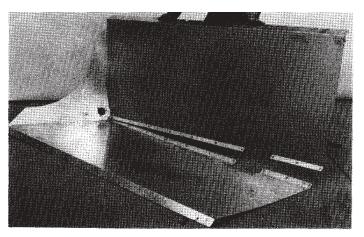
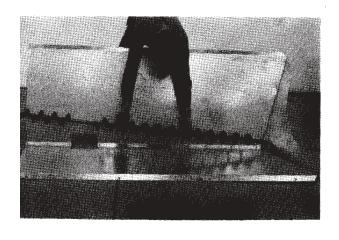


PHOTO 25 PHOTO 26



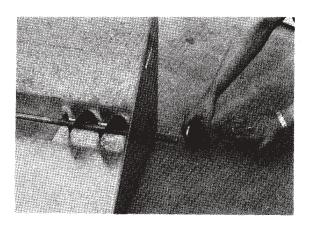
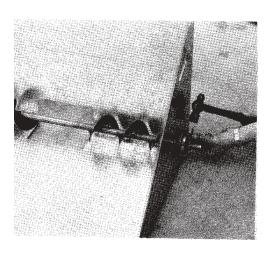
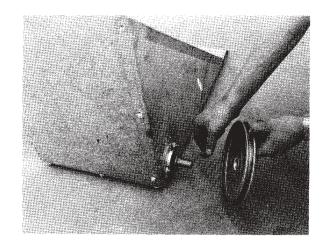


PHOTO 27

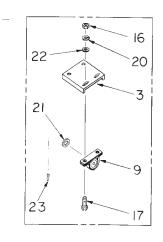


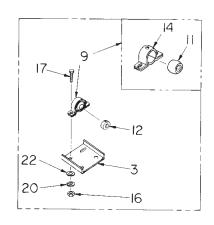


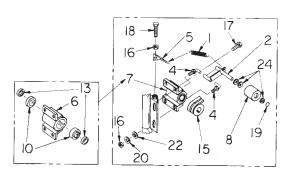
РНОТО 28

PHOTO 29 PHOTO 30

# **BEARING REVISIONS**







FRONT DRUM BEARING

REAR DRUM BEARING

DOUBLE BEARING

REPLACES PTO113

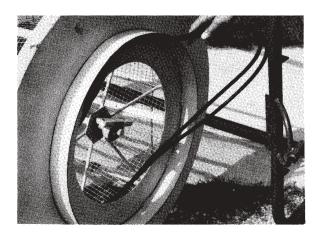
REPLACES PTO113

REPLACES PTO418

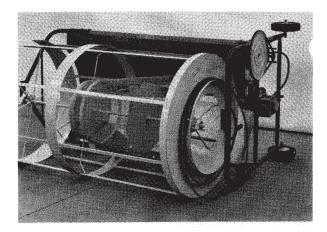
# **Bearings Parts List**

Ref.	Part	No.	
No.	Number	Req'd.	Description
1.	103C0025	1	Extension Spring, Belt Tightener
2.	202B0046	1	Belt Tightener, Drum Drive
3.	202B0050	2	Bearing Mount Extension Bracket
4.	202B0051	2	Pivot Bolt, Belt Tightener Bracket, 3/8"
5.	202B0052	1	Spring Tension Bracket
6.	202B0063	1	Double Bearing Weldment
7.	202B0064	1	Double Bearing Assembly
8.	204B0018	1	Flat Idler Pulley
9.	PT0133	2	Wood Pillow Block Bearing, 7/8" Complete
10.	PT0208	2	Bearing, Eccentric Lock, 7/8"
11.	PT0228	2	Wood Bearing, 7/8" Bore
12.	PT0400	1	Collar, 7/8" Set Screw Lock
13.	PT0402	2	Collar, Eccentric Lock, 7/8"
14.	PT0414	2	2 Holed Stamped Pillow Block
15.	PT0611	1	Pulley, 2-1/2" x 7/8", Double Groove, A Section
16.	1FH0765	9	Hex Nut, 3/8"
17.	2FH0855	8	Hex Bolt, 3/8" x 1"
18.	2FH01041	1	Hex Bolt, 3/8" x 5 1/2", Full Thread
19.	3FH0561	1	Snap Ring, 5/8"
20.	3FH0791	8	Lock Washer, 3/8" Medium
21.	3FH0829	1	Machinery Bushing, 1 3/8" O.D. x 7/8" I.D. x 14 GA
22.	3FH0864	8	Flat Washer, 5/16"
23.	3FH0930	1	Spring Pin, 3/16" x 1 1/4"
24.	3FH0952	3	Flat Washer, 5/8" SAE

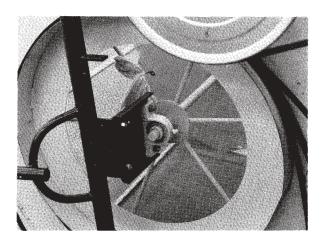




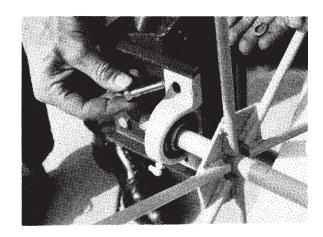
рното 34



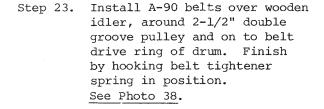
рното 35



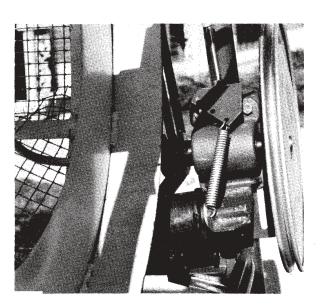
рното 36



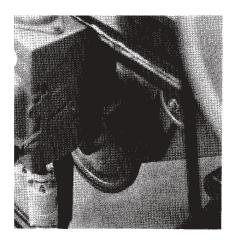
рното 37

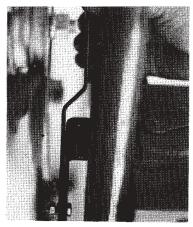


NOTE: If trash pan equipped, install A-112 belt on to 8" trash pan pulley, then on to outer edge of drum drive ring. Adjust belt tension with flanged idler pulley. Attach trash pan belt shield bracket using two 1/4" x 3/4" hex head bolts, lock washers and nuts. Finish by bolting belt shield to bracket, using two 1/4" x 3/4" carriage bolts, flat washers, lock washers and nuts. See Photos 39, 40 and 41.



РНОТО 38





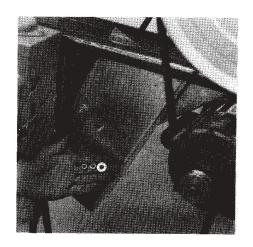
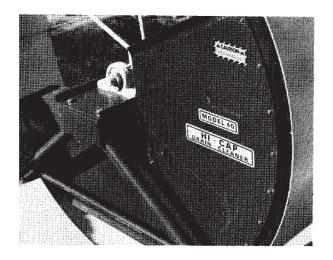


PHOTO 39 PHOTO 40 PHOTO 41

Step 24. Bolt discharge shield on to discharge shield bracket, using four  $1/4" \times 3/4"$  round head machine screws, lock washers and nuts. See Photo 42.



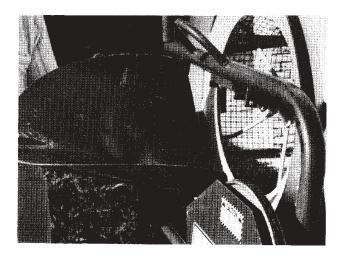


PHOTO 42



РНОТО 44

рното 43

Step 24. Bolt intake pan between small brackets on top of front frame, using two 3/8" x 1" bolts, lock washers and nuts.

See Phots 43 and 44.

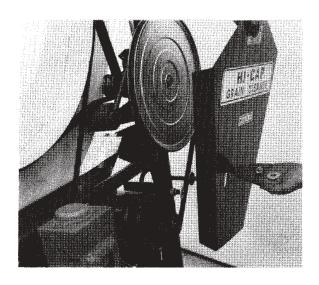
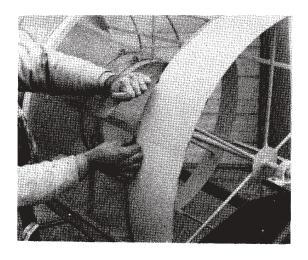
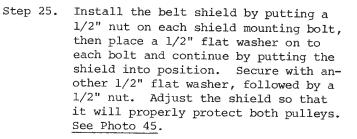


PHOTO 45



РНОТО 46

For easy placement of outside drum screens, two door springs can be attached to either a small piece of steel or wood with hooks to hook into the screen. Then, by using a stick or broom handle, tap the screen lightly. The door springs will take all the excess slack out of the outside screen so the so the drum straps can easily put on and secured. Straps should be secured with 1/4" x 2-1/2" machine screws and nuts. See Photos 47 and 48.



Step 26. The cone screens are usually installed at the factory. Should replacement or change be necessary, remove the straps and self-tapping screws.

A variety of cone screens are available for the individual needs. See Page 33.

Outside screens are installed by wrapping the screen around the outside of the drum. BE SURE outside screen is lapped as shown in Photo 46. If incorrectly installed, grain will get behind the screens, causing them to work their way off the drum. Place head of machine screws in direction of drum rotation.

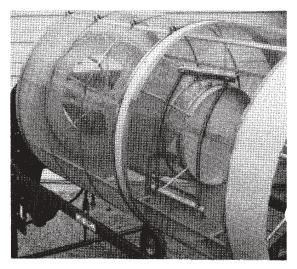
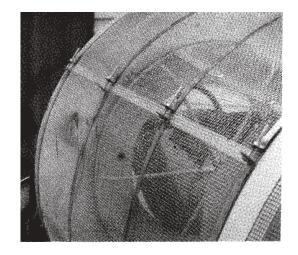


PHOTO 47



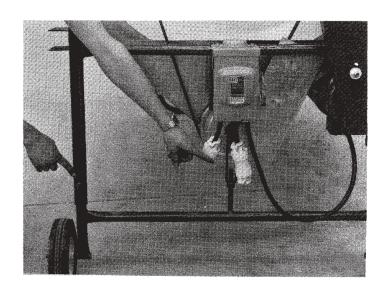
NOTE: Screen lap and outside drum straps should not be spliced on the same tumbling bar.

рното 48

Step 26. Continued. Outside drum straps that are placed directly over drum rings should be tightened securely. Common sense should be used when tightening straps that only come in contact with the outside drum tumbling bars. Deforming of the bars could result if these straps are over-tightened. BE SURE straps are positioned as shown in <a href="Photos 47">Photos 47</a> and 48. REMEMBER, screen lap and outside drum straps should not be spliced on the same tumbling bar.

Step 27. By loosening the set screws and turning the turn buckle, you can adjust the slant of your drum for proper operation. See

Photo 49. The grain will pass through the screener faster with a steep slant. The cleaning action will be more thorough with less slant.



IF TRASH PAN EQUIPPED:

рното 49

Step 28. The drum side panel will mount with the channel edge on the top and to the outside. Bolt the end shield to the front end of the side panel using two 1/4" x 1/2" pan head machine screws, hex flange lock nuts.

Step 29. Bolt the two posts to the drum side panel using 1/4" x 3/4" hex bolts, lock washers and hex nuts.

NOTE: Before the bolts are tightened, the posts must be inserted into the slots of the brackets on the frame for proper alignment. After the posts are aligned,

tighten the bolts. To secure side panel, push down and insert hair pin through hole in the post. See Photos 50, 51 and 52.

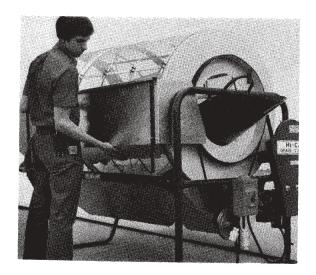


PHOTO 50

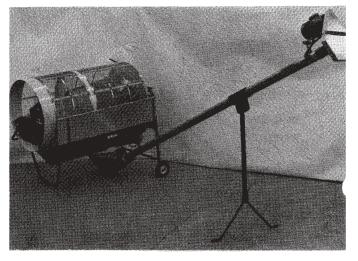
PHOTO 51



Photo 52 shows a Model 40 Hi Cap Grain Cleaner with optional trash pan attachment, less auger.

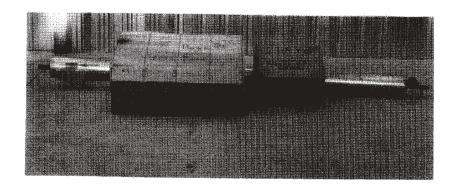
PHOTO 52

Photo 53 shows a Model 40 Hi Cap Grain Cleaner with optional trash pan, and  $4" \times 15'$  trash auger.



рното 53

# MODEL 40 8" X 8' FEED-IN AUGER ASSEMBLY INSTRUCTIONS



### COMPONENT PARTS FOR 8" FEED-IN AUGER

Step 1. Place sealed bearing between bearing flanges, and bolt to auger head. BE SURE eccentric lock is on the outside. Use two 5/16" x 3/4" carriage bolts, lock washers and nuts. See Photos 1 and 2.



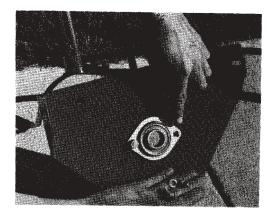
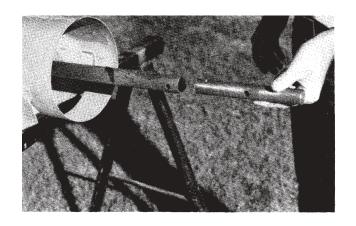


PHOTO 1 PHOTO 2

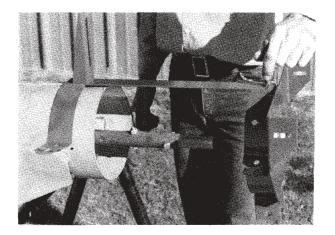
Step 2. Slide stub shaft into upper end of auger flighting. BE SURE keyway is left exposed. Fasten with two 3/8" x 1-3/4" Grade 5 bolts, and 3/8" lock nuts. See Photos 3 and 4.

Step 3. Place auger head over auger tube, sliding stub shaft through bearing. See Photo 5.

Step 4. Install 1" locking collar on to bearing. BE SURE to lock the collar with the rotation of the shaft. Auger shaft should stick through the locking collar 1-5/8". Securely tighten locking collar set screw. See Photos 6, 7 and 8.



рното 3



рното 5



рното 7

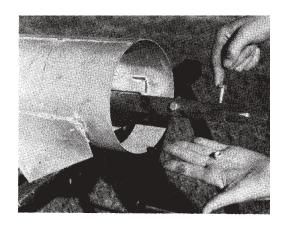
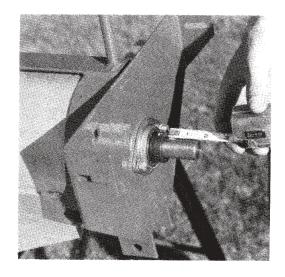


PHOTO 4



рното 6

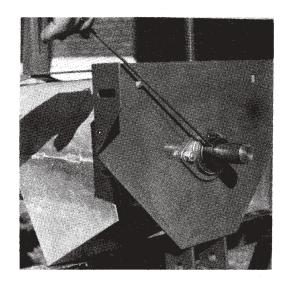
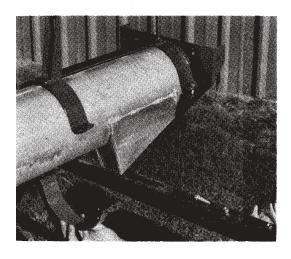


PHOTO 8

Step 5. Using one 2" strap bracket, four 3/8" x 1-1/4" bolts and nuts, fasten auger head securely to auger tube. See Photos 9 and 10.



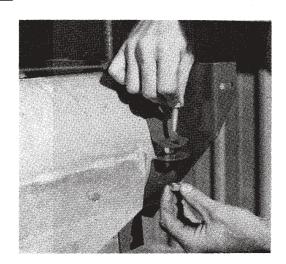


PHOTO 9

PHOTO 10

Step 6. Place a 1/2" nut on the threaded stub bolt on the auger head. Slide motor mount angle over stub bolt and thread another 1/2" nut over the angle. Install motor mount base plate to the auger head, using two 3/8" x 3/4" carriage bolts, lock washers and nuts. DO NOT TIGHTEN AT THIS TIME. See Photos 11 and 12.

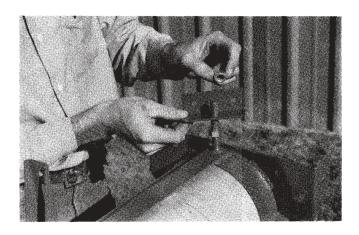


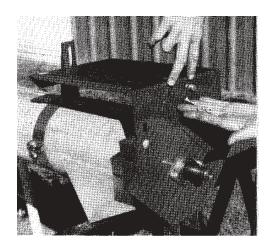
PHOTO 11



PHOTO 12

Step 7. Put two 5/16" x 3/4" carriage bolts, lock washers and nuts through motor mount angle, and motor mount base plate.

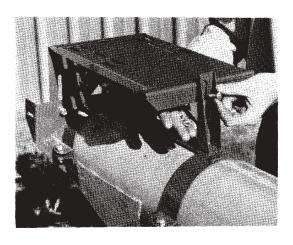
For 2 HP motor, bolt as in Photo 13. For 1-1/2 HP motor, bolt as in Photo 14.



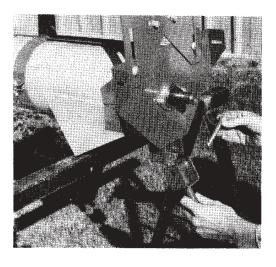


Step 8. Using 5/16" carriage bolt, lock washer and nut, bolt in the rear of the motor mount base plate to the rear support on the auger head. See Photo 15.

Step 9. Bolt the auger pivot pin to under side of the auger head, using 1/2" x 3-1/2" bolt and lock nut. Auger pivot must have free movement. See Photo 16.



РНОТО 15



рното 16

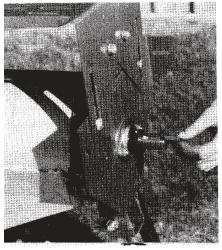
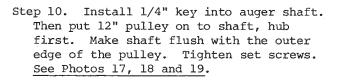
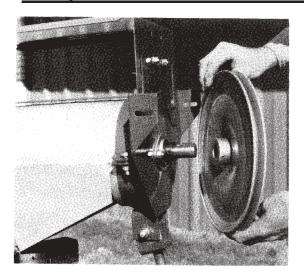


PHOTO 17

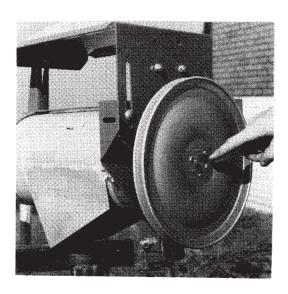
18





РНОТО 18

РНОТО 19



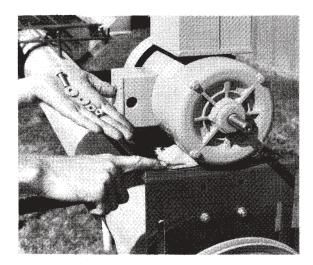


PHOTO 20

Step 11. Bolt the motor to the motor mount base plate, using four 5/16" x 1" bolts, two flat washers, one lock washer per bolt and nuts.

See Photo 20.

Step 12. Put key and 3" pulley on to motor shaft, align motor pulley with 12" auger pulley and install belt. Adjust belt tension by raising the 1/2" nuts on the threaded stub bolts. After belt adjustment has been made, tighten all bolts left loose during motor mount assembly. See Photos 21 and 22.

Auger motor must be wired the same voltage as cleaner and checked for proper rotation.

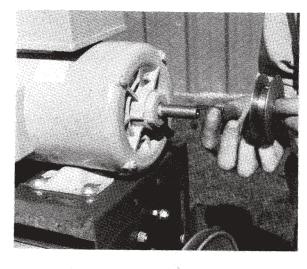


PHOTO 21

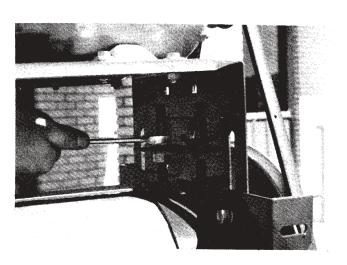
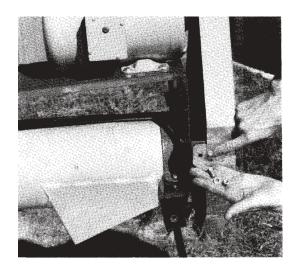


PHOTO 22



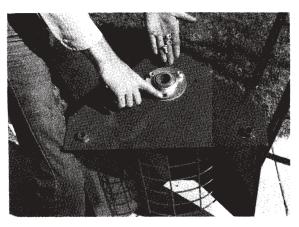




рното 24

РНОТО 23

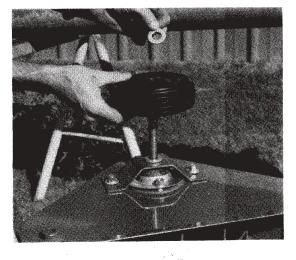
Step 13. Using two 5/16" carriage bolts, lock washers and nuts, bolt the belt shield to the tabs on the auger head. See Photo 23.



рното 25



РНОТО 26

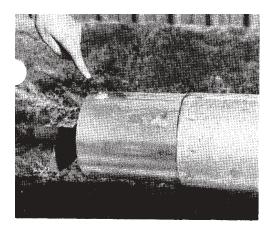


рното 27

Step 14. Put wooden bearing between bearing flanges and bolt to tail cage hopper with three 3/8" x 3/4" carriage bolts, lock washers and nuts. See Photos 24 and 25.

Step 15. Install hopper wheel bracket, using two 3/8" x 3/4" carriage bolts, flat washers, lock washers and nuts. Slide two 5/8" SAE washers on to the shaft, then the wheel, and another 5/8" SAE washer. Finish by installing a 1-1/4" cotter pin.

See Photos 26 and 27.



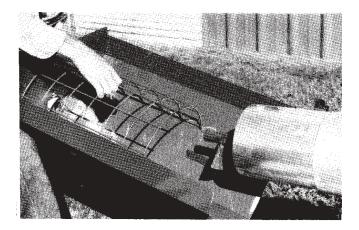


PHOTO 28 PHOTO 29



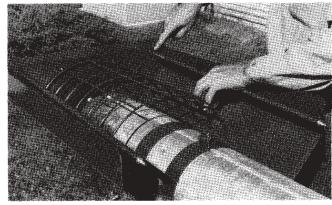


PHOTO 30 PHOTO 31

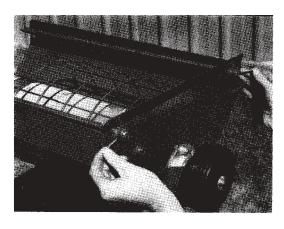
Step 16. Slide flow restrictor tube into intake end of auger tube with nut welded on to restrictor tube on the outer end. See Photo 28.

Step 17. Put the tail cage hopper assembly on to the auger tube. Insert the end of auger shaft into the wooden bearing. Secure the tail cage hopper assembly to the auger tube by using two 2" strap brackets. (Be sure to put the 2" strap bracket with pipe and threaded nut toward the top of the tail cage assembly as shown in <a href="Photo 29">Photo 29 and 30</a>.) Securely fasten with four 3/8" x 1-1/4" hex head bolts as shown in Photo 31.

Step 18. Put the flat end of the guide rods into the bushings provided at the back of the hopper. Align the holes in the rod with those in the bushing and secure with 1/8" x 1-1/4" cotter pins as shown in Photos 32 and 33.

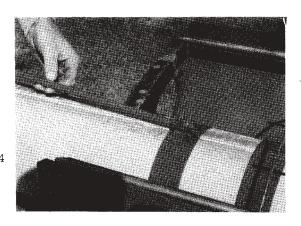


рното 32



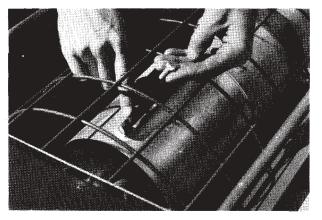
РНОТО 33

РНОТО 34

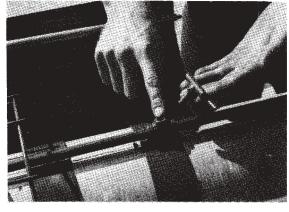


Step 19. Place the slide flow restrictor adjustment handle through the bushing welded to the 2" strap brackets and bolt on to the flow restrictor tube with one 5/16" x 3/4" hex head bolt and lock washer. Finish by turning the wing bolt into the nut welded on bushing of the strap bracket. See Photos 34, 35 and 36.

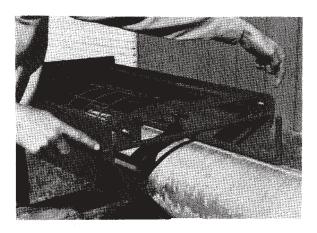
Step 20. Install the hopper latch and upper glide rod support bracket by placing the ends of the glide rod support bracket through the holes in the hopper and on to the pointed guide rod ends. Fasten the latch to the hopper with the two 3/8" flat washers, and two cotter pins. See Photos 37 and 38.



РНОТО 35



РНОТО 36

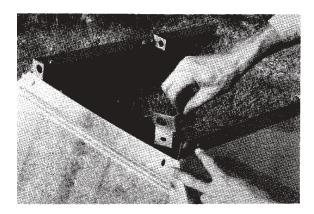


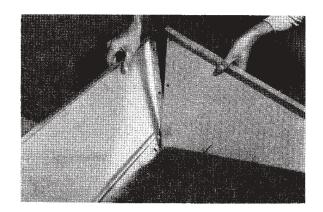
РНОТО 37



РНОТО 38

Step 21. Assemble the hopper extensions using six 1/4" x 1/2" pan head machine screws and 1/4" hex head flanged whiz lock nuts. Once the upper extensions are assembled, fasten the glide rod guides to the upper extensions using ten 1/4" x 1/2" pan head machine screws. See Photos 39 and 40. BE SURE to install bolts as shown in photo.

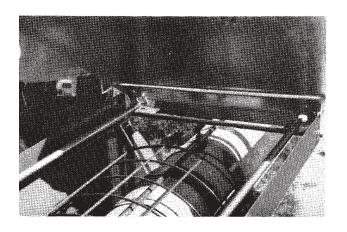




рното 39

рното 40

Step 22. Slide hopper extension assembly on to guide rods. Lift up latch and finish assembly by placing hair pin clips through holes of guide rods. See Photos 41 and 42.



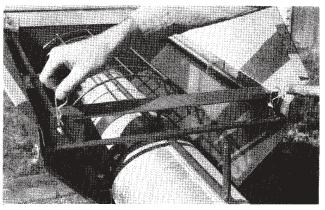
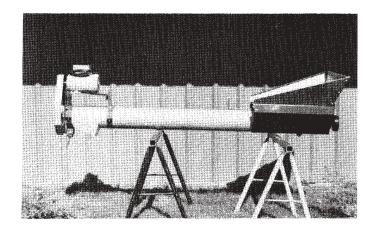


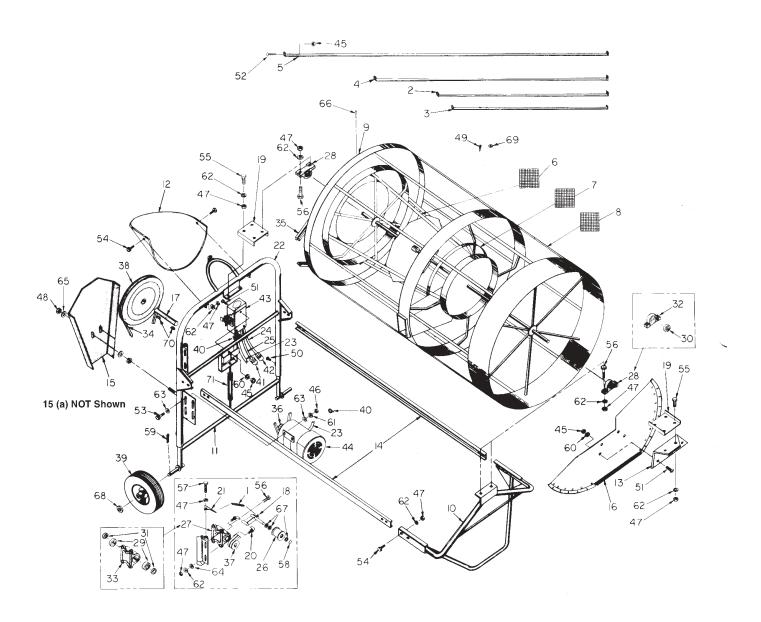
PHOTO 41

рното 42

OPERATE AUGER AND OBSERVE FOR PROPER ROTATION. Change wires in motor for rotation correction.



# **MODEL 40 HI-CAP GRAIN CLEANER PARTS**

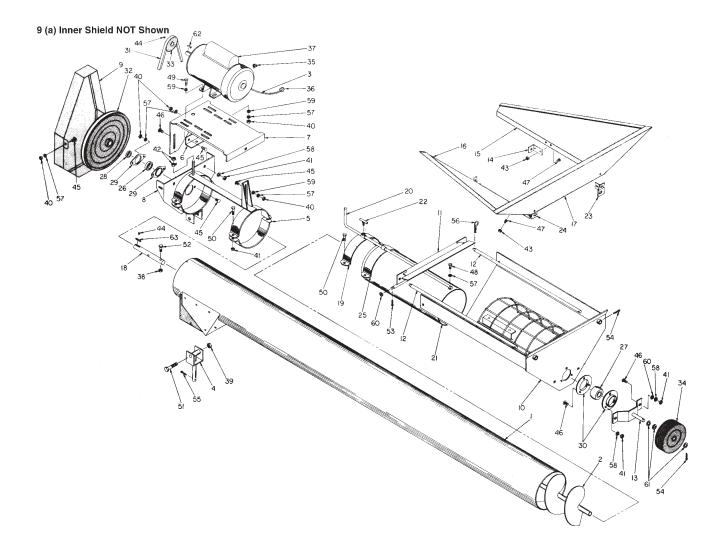


REF.	PART	NO. REQ'D.	DESCRIPTION
NO. 1.	NUMBER 103C0025	1 1	Extension Spring, Belt Tightener
1. 2.	202A0028	1	Inside Cone Screen Strap, 60-1/4"
3.	202A0029	1	Inside Cone Screen Strap, 57-1/8"
4.	202A0030	1	Inside Cone Screen Strap, 88-1/2"
5.	202A0031	7	Outside Drum Screen Strap, 125-7/8"
6.	202A0038	2	Screen, Inside Cone
٥.	2021 10000	_	(Refer to Screen Selection Guide for Wire Size)
7.	202A0039	1	Screen, Trash Spout Section
8.	202A0040	1	Screen, Outside Drum, Set of 1-24" Width and 1-36"
			Width
9.	202A0042	1	Drum
10.	202B0001	1	Frame End, Rear
11.	202B0022	1	Adjusting Leg, Front Frame
12.	202B0025	1	Intake Pan
13.	202B0034	1	Bracket, Discharge Shield
14.	202B0035	2	Side Rail, Main Frame
15.	202B0038	1	Belt Shield
15a.	2022068	1	Shield, Inner
16.	202B0041	1	Discharge Shield
17.	202B0044	1	Countershaft, 7/8" x 7-3/8"
18.	202B0046	1	Belt Tightener, Drum Drive
19.	202B0050	2	Bearing Mount Extension Bracket
20.	202B0051	2	Pivot Bolt, Belt Tightener Bracket, 3/8"
21. 22.	202B0052 202B0057	1 1	Spring Tension Bracket
22. *23.		1	Main Frame, Front Power Cord, Cleaner Motor
23. *24.	202E0003 202E0008	1	Power Cord, Cleaner Motor Power Cord, To Auger, 115 Volt
24.	205E0005	1	Power Cord, To Auger, 113 Volt Power Cord, To Auger, 230 Volt
*25.	202E0009	1	Power Cord, To Adger, 230 Volt Power Cord, Lead In, 115 Volt
	205E0004	1	Power Cord, Lead In, 230 Volt
26.	204B0018	1	Flat Idler Pulley
27.	PT0108	1	Double Bearing, Countershaft, 7/8"
28.	PT0113	2	Drum Bearing, Set Screw, 7/8"
29.	PT0208	2	Bearing, Eccentric Lock, 7/8"
30.	PT0209	1	Bearing, 7/8"
31.	PT0402	2	Collar, Eccentric Lock, 7/8"
32.	PT0417	1	Bearing Housing, Drum
33.	PT0418	1	Bearing Housing, Double
34.	PT0497	1	Belt, Motor Drive, A-55
35.	PT0512	2	V-Belt, Drum Drive, A-90 (Matched Set)
36.	PT0605	1	Pulley, Motor Drive, 5/8" x 2-1/4", A Section
37.	PT0611	1	Pulley, 2-1/2" X 7/8", Double Groove, A Section
38.	PT0690	1	Pulley, 7/8" x 14", A Section
39.	MS0010	2	Wheel, 2-3/4" x 10" x 3/4"
*40.	1EL0401	3 4	Connector, 3/8", 115 Volt
	1EL0401 1EL0403	1	Connector, 3/8", 230 Volt Connector, 3/4", 115 Volt
*41.	1EL0403	1	Plug. 125 Volt. 30 Amp.
41.	1EL0668	1	Plug, 230 Volt, 30 Amp.
*42.	1EL0608	1	Twist Connector, 125 Volt, 30 Amp.
T4.	1EL0675	1	Twist Connector, 230 Volt, 30 Amp.
*43.	2EL0320	i	Switch Box, 240 Volt A.C., 30 Amp.
44.	3EL5064	1	Motor, 1/2 HP., TEFC, Electric
45.	1FH0763	17	Hex Nut, 1/4"
46.	1FH0764	4	Hex Nut, 5/16"
47.	1FH0765	23	Hex Nut, 3/8"
48.	1FH0767	4	Hex Nut, 1/2"
49.	2FH0477	12	Self Tapping Hex Screw, #10 x 3/4"
50.	2FH0617	2	Square Head SetScrew, 3/8" x 3/4"
51.	2FH0726	7	Round Head Machine Screw, 1/4" x 3/4"
52.	2FH0735	10	Round Head Machine Screw, 1/4" x 2-1/2"
53.	2FH0830	4	Hex Bolt, 5/16" x 1"
54.	2FH0855	10	Hex Bolt, 3/8" x 1"
55.	2FH0856	4	Hex Bolt, 3/8" x 1-1/4"
56.	2FH0857	6	Hex Bolt, 3/8" x 1-1/2"
57.	2FH1041	1	Hex Bolt, 3/8" x 5-1/2", Full Thread
58.	3FH0561	1	Snap Ring, 5/8" Cotter Pin, 3/16" x 1-1/4"
59. 60.	3FH0730	2	Cotter Pin, 3/16" x 1-1/4"  Lock Washer, 1/4"
60. 61.	3FH0789 3FH0790	7 4	Lock Washer, 5/16" Medium
62.	3FH0790 3FH0791	22	Lock Washer, 3/8" Medium
62. 63.	3FH0863	8	Flat Washer, 1/4"
63. 64.	3FH0863 3FH0864	8 4	Flat Washer, 5/16"
65.	3FH0867	4	Flat Washer, 1/2"
66.	3FH0930	1	Spring Pin, 3/16" x 1-1/4"
67.	3FH0952	3	Flat Washer, 5/8" SAE
68.	3FH0954	2	Flat Washer, 3/4" SAE
69.	3FH0976	12	Cupped Washer, 7/8" O.D. x 17/64"
70.	3FH0992	2	Woodruff Key, 3/16" x 1"

<sup>\*</sup> Not Provided By DMC



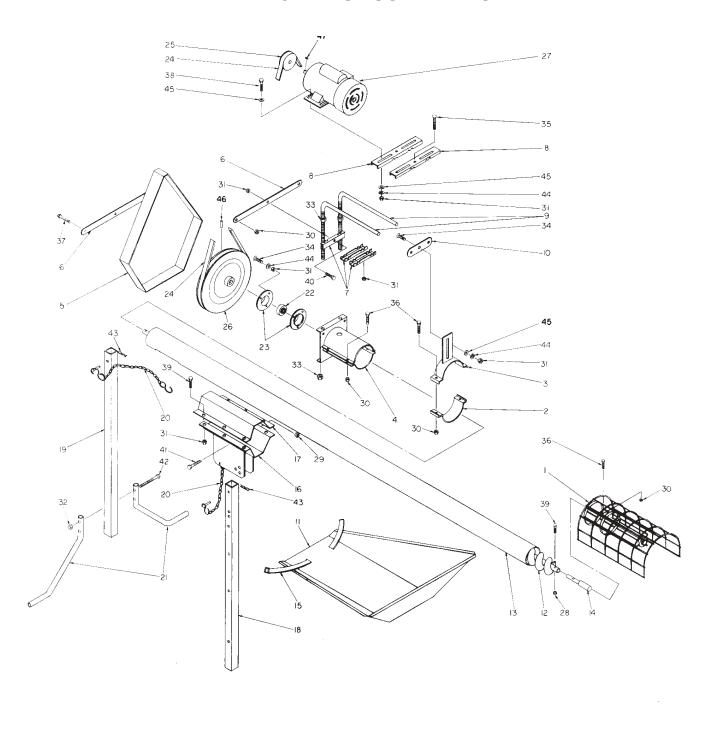
# 8" x 8' AUGER PARTS



REF. NO.	PART NUMBER	NO. REQ'D.	DESCRIPTION
1.	202C0137	1	Auger Tube, 7'
2.	202C0140	1	7" O.D. Auger, 8'
3.	202E0006	1	Power Cord (Specify 115 Volt or 230 Volt)
4.	204C0010	1	Auger Pivot
5.	205C0002	1	2" Strap Bracket
6.	205C0003	1	Motor Mount Angle
7.	205C0005	1	Motor Mount Base Plate
8.	205C0008	1	Auger Head
9.	205C0012	1	Motor Belt Shield
9a.	2053103	1	Shield, Inner
10.	205C0016	1	Tail Cage Hopper
11.	205C0022	1	Latch and Glide Rod Support
12.	205C0025	2	Glide Rod
13.	205C0027	1	Hopper Wheel Bracket
14.	205C0030	2	Glide Rod Guide
15.	205C0031	1	Right Sliding Hopper Sheet
16.	205C0032	1	Left Sliding Hopper Sheet
17.	205C0038	1	Sliding Hopper End Sheet
18.	205C0039	1	Stub Shaft
19.	205C0040	1	Flow Restrictor Strap Bracket
20.	205C0043	1	Flow Restrictor Adjustment Handle
21.	205C0044	1	Flow Restrictor Tube
22.	2FH0428	1	Adj. Screw, 5/16" x 7/8"
23.	205C0056	1	Right End Glide Rod Guide
24.	205C0057	1	Left End Glide Rod Guide
25.	205C0060	1	Flow Restrictor Strap Bracket, Without Nut
26.	PT0203	1	Bearing, Sealed With Eccentric Lock, 1"
27.	PT0219	1	Wood Bearing, 1-1/4" Bore
28.	PT0401	1	Collar, Eccentric Lock, 1"
29.	PT0420	2	2 Hole Bearing Mounting Flange
30.	PT0424	2	3 Hole Center Flange Mount
31.	PT0490	1	B-48 V-Belt
32.	PT0681	1	Pulley, 1" x 12", B Section
33.	PT0706	1	Motor Drive Pulley, 5/8" x 3", B Section
34.	MS0021	1	6" Rubber Wheel
35.	1EL0401	1	Connector, 3/8"
36.	1EL0667	1	Plug, 125 Volt, 30 Amp.
	1EL0668	1	Plug, 230 Volt, 20 Amp.
37.	3EL5097	1	Motor, 1-1/2 HP., TEFC, Electric
38.	1FH0736	2	Lock Nut, 3/8"
39.	1FH0738	1	Lock Nut, 1/2"
40.	1FH0764	11	Hex Nut, 5/16"
41.	1FH0765	11	Hex Nut, 3/8"
42.	1FH0767	2	Hex Nut, 1/2"
43.	1FH0995	16	Hex Flange Whiz Lock Nut, 1/4"
44.	2FH0512	3	Socket Head Set Screw, 5/16" x 5/16"
45.	2FH0645	7	Carriage Bolt, 5/16" x 3/4"
46.	2FH0659	7	Carriage Bolt, 3/8" x 3/4"
47.	2FH0747	16	Pan Head Machine Screw, 1/4" x 1/2"
48.	2FH0828	1	Hex Bolt, 5/16" x 3/4"
49.	2FH0830	4	Hex Bolt, 5/16" x 1"
50.	2FH0856	8	Hex Bolt, 3/8" x 1-1/4"
51.	2FH0913	1	Hex Bolt, 1/2" x 3-1/2"
52.	2FH1057	2	Hex Bolt, 3/8" x 1-3/4", Grade 5
53.	3FH0712	2	Cotter Pin, 1/8" x 3/4"
54.	3FH0714	3	Cotter Pin, 1/8" x 1-1/4"
55.	3FH0730	1	Cotter Pin, 3/16" x 1-1/4"
56.	3FH0770	2	Cotter Hair Pin, 1/8" x 2-3/8"
<b>57</b> .	3FH0790	12	Lock Washer, 5/16"
58.	3FH0791	7	Lock Washer, 3/8"
59.	3FH0864	9	Flat Washer, 5/16"
60.	3FH0865	4	Flat Washer, 3/8"
61.	3FH0952	3	Flat Washer, 5/8" SAE
62.	3FH1015	1	Square Key, 3/16" x 1"
63.	3FH1026	1	Square Key, 1/4" x 1"

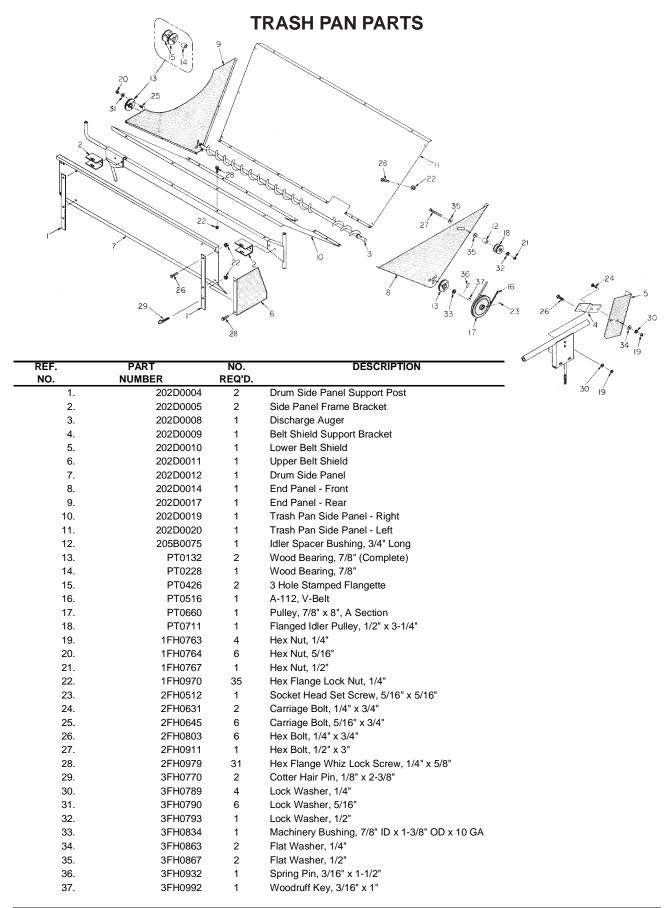


# 4" X 15' FINES AUGER PARTS



REF.	PART	NO.	DESCRIPTION
NO.	NUMBER	REQ'D.	
1.	201C0001	1	Auger Tail Cage With Bushing
2.	201C0002	1	Strap Bracket, Auger Head (Lower)
3.	201C0003	1	Strap Bracket, Auger Head (Upper)
4.	201C0004	1	Auger Head, 4"
5.	201C0005	1	Shield, Belt Drive
6.	201C0006	2	Strap, Shield Mount
7.	201C0007	3	Motor Mount Bracket (Lower)
8.	201C0008	2	Motor Mount Bracket (Upper)
9.	201C0009	2	Motor Mount Rod
10.	201C0010	1	Motor Mount Rod Adaptor
11.	201C0011	1	Hopper
12.	201C0014	1	Auger, 4" x 15'
13.	201C0015	1	Auger Tube, 4" x 14'6"
14.	201C0016	1	Auger Stub Shaft
15.	202C0017	1	Hopper Strap
16.	202C0143	1	Lower Auger Clamp
17.	202C0145	1	Tube Clamp, 4" Auger
18.	202C0146	1	Auger Support Tube (Inner)
19. 20.	202C0147	1	Auger Support Tube (Outer)
20. 21.	202C0148	2	Clevis Pin, Chain
21. 22.	202C0151	2	Auger Support Leg
22. 23.	PT0210 PT0416	1 2	Bearing Insert, 1" Bore Bearing Housing, 3 Hole Round Stamped Flange
23. 24.	PT0486	1	A-45 V-Belt
24. 25.	PT0609	1	Pulley, 2-1/2" x 5/8" Single Groove, A Section
26.	PT0679	1	Pulley, 12" x 1" Single Groove, A Section With Pin Hole
27.	3EL5081	1	Motor, 1 HP, Single Phase, 115/230 Volt, TEFC, With
21.	3LL3001	•	Kev
	3EL5083	1	Motor, 1 HP, Three Phase, 230/460 Volt, TEFC, With Key
28.	1FH0735	1	Lock Nut, 5/16"
29.	1FH0736	i	Hex Lock Nut, 3/8"
30.	1FH0763	10	Hex Nut, 1/4"
31.	1FH0764	17	Hex Nut, 5/16"
32.	1FH0765	2	Hex Nut, 3/8"
33.	1FH0767	4	Hex Nut, 1/2"
34.	2FH0645	4	Carriage Bolt, 5/16" x 3/4"
35.	2FH0648	2	Carriage Bolt, 5/16" x 1-1/2"
36.	2FH0806	8	Hex Bolt, 1/4" x 1-1/4"
37.	2FH0813	2	Hex Bolt,1/4" x 3"
38.	2FH0830	4	Hex Bolt, 5/16" x 1"
39.	2FH0831	7	Hex Bolt, 5/16" x 1-1/4"
40.	2FH0832	1	Hex Bolt, 5/16" x 1-1/2"
41.	2FH0859	1	Hex Bolt, 3/8" x 2"
42.	2FH0867	2	Hex Bolt, 3/8" x 4"
43.	3FH0770	2	Cotter Hair Pin, 1/8" x 2-3/8"
44.	3FH0790	8	Lock Washer, 5/16"
45.	3FH0864	9	Flat Washer, 5/16"
46.	3FH0896	1	Spring Pin, 5/16" x 2"
47.	3FH1015	1	Square Key, 3/16" x 1"





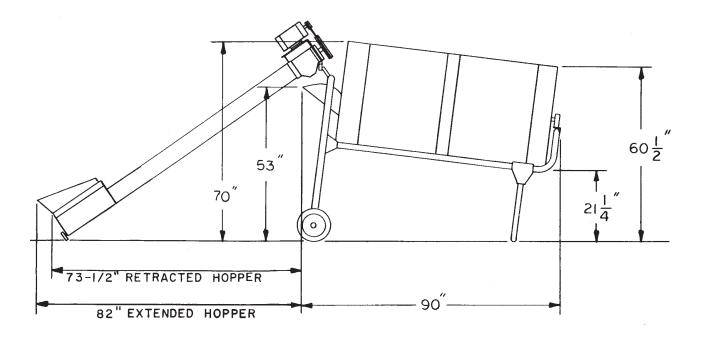


# **MODEL 40 HI-CAP CAPACITIES**

# CAPACITIES (Shelled Corn)

15% Moisture Test	1600 BPH
25% Moisture Test	1000 BPH
30% Moisture Test	700 BPH
35% Moisture Test	400 BPH
The capacities listed above can vary with grains, amou	unt of foreign material,
and test weights.	<u> </u>

# **OVERALL DIMENSIONS**



# **AVAILABLE SCREENS**

## CONE SCREENS OUTSIDE DRUM SCREENS

#### **CORN SCREENS**

2 x 2 19 GA Wire - Small
5/8 x 5/8 x 17 GA Wire - Standard
3/4 x 3/4 x 16 GA Wire - Large
4-1/2 x 4-1/2 x 21 GA Wire - Small
4 x 4 x 23 GA Wire - Standard
3-1/2 x 3-1/2 x 20 GA Wire - Large

#### **POPCORN SCREENS**

 4 x 4 x 23 GA Wire - Small
 8 x 8 x 25 GA Wire - Small

 3 x 3 x 21 GA Wire - Standard
 6 x 6 x 25 GA Wire - Standard

 2 x 2 x 19 GA Wire - Large
 5 x 5 x 23 GA Wire - Large

#### **SOYBEAN SCREENS**

3 x 3 x 21 GA Wire - Small
2 1/2 x 2 1/2 x 19 GA Wire - Standard
2 x 2 x 19 GA Wire - Large

6 x 6 x 25 GA - Small
5 x 5 x 23 GA Wire - Standard
4 1/2 x 4 1/2 x 21 GA Wire - Large

#### SCREENS RECOMMENDED FOR CLEANING CORN FROM SOYBEANS

3 x 3 x 17 GA Wire - Standard 6 x 6 x 25 GA Wire - Small 5 x 5 x 23 GA Wire - Standard

#### WHEAT, MILO, OATS AND BARLEY SCREENS

 4 x 4 x 23 GA Wire - Small
 10 x 10 x 23 GA Wire - Small

 3 x 3 x 21 GA Wire - Standard
 9 x 9 x 29 GA Wire - Medium Small

 2 x 2 x 19 GA Wire - Large
 8 x 8 x 25 GA Wire - Standard

 7 x 7 x 25 GA Wire - Medium Large

 6 x 6 x 25 GA Wire - Large

#### **SUNFLOWER SCREENS**

 3 x 3 x 21 GA Wire - Small
 8 x 8 x 25 GA Wire - Small

 2 x 2 x 19 GA Wire - Standard
 6 x 6 x 25 GA Wire - Standard

 5/8 x 5/8 x 17 GA Wire - Large
 5 x 5 x 23 GA Wire - Large

#### **RICE SCREENS**

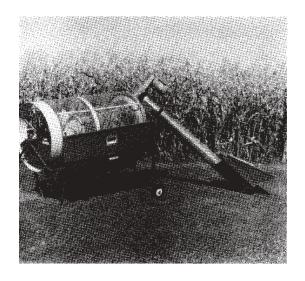
4 x 4 x 23 GA Wire - Standard
3 x 3 x 21 GA Wire - Large
8 x 8 x 25 GA Wire - Large

#### **RAPE, MILLET & GRANOLA**

No Cone Screen Specified 12 x 12 x 24 GA Wire

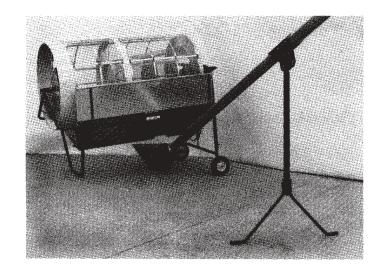
Various other sizes available upon request Write or Call David Manufacturing Company, Inc. 1600 12th Street N.E. Mason City, IA 50401 641-423-6182



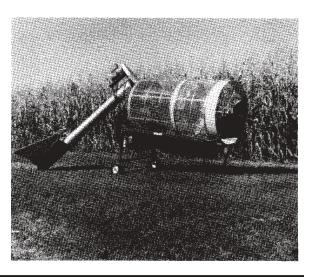


MODEL 40 HI-CAP GRAIN CLEANER equipped with Trash Pan and 8" Feed-in Auger Right Side

4" x 15' Trash Auger Stand and Hopper (Optional Equipment)



MODEL 40 HI-CAP GRAIN CLEANER
equipped with
Trash Pan and 8" Feed-in Auger
Left Side



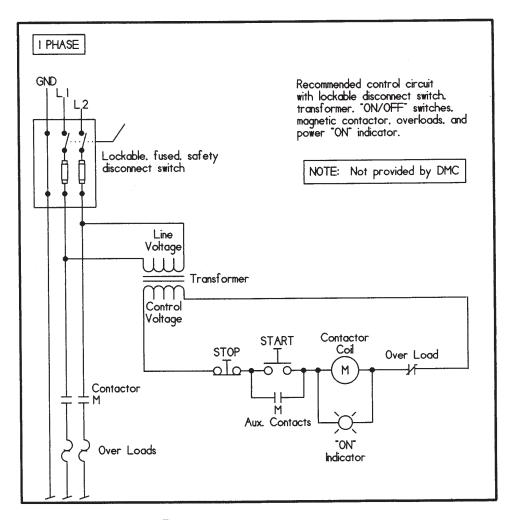


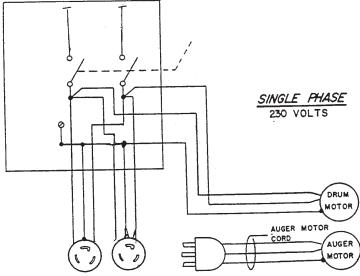
# **ELECTRICAL WIRING**

The DMC Grain Cleaner is shipped without wiring installed in the machine. A qualified electrician should install wiring that complies with standard BS-7671:1992.

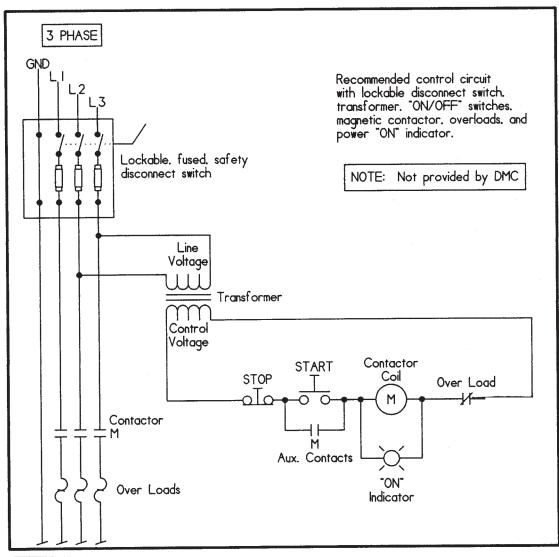
Electrical power to the cleaner should be supplied through a single lockable switch. A magnetic "ON/OFF" switch that defaults to "OFF" with a power interruption should be installed as the start switch for the Grain Cleaner. These items are not furnished by DMC. A wiring diagram of a recommended example of the control circuit is shown on the next two pages.

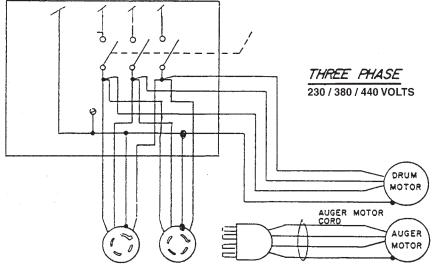
# 1 PHASE





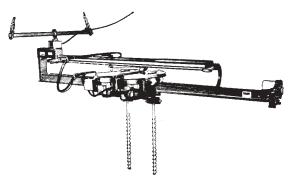
# 3 PHASE







# **CroProcessing Equipment**



# DMC DESIGN III SERIES Grain Stirring System

Effectively stirs all grain in the drying bin; leaves no gaps; permits more efficient drying. Reduces drying time and costs by up to 50%. Results in better grain uniformity, less chance of spoilage. Also helps preserve stored grain; reduces insect problems. Choice of models to match bin size.



# DMC Bin-Level® Grain Spreader

Always spreads grain uniformly. Automatically operates when right weight of grain in hopper activates the mercury switch control. Grain showers up and out, evenly over entire bin area. Handles any filling rate up to 3,500 bushels per hour. Easily installed. Written guarantee of performance.



# DMC Hi-Cap® Grain Cleaner

Double-cleans grain to remove all foreign material — coarse and fine — that can cut profits. Helps increase the bushel/hour capacity of your drying system while it improves the grain for drying or storage; makes grain worth more at selling time. Hi-Cap low power requirement saves fuel; one-man operation saves time and effort. Three models match capacity to your needs.





# HI-CAP 40 GRAIN CLEANER OWNER'S MANUAL

This product conforms to the EC Directive 89/392/EEC (amended by Council Directive 91/368/EEC), the Machinery Directive, and in particular, the Essential Health and Safety Requirements that apply to it, specifically, Schedule 1: General Points.

David Manufacturing Company 1600 12th Street N.E. Mason City, Iowa 50401 USA

Phone: 641-424-7010 FAX: 877-362-8238

