

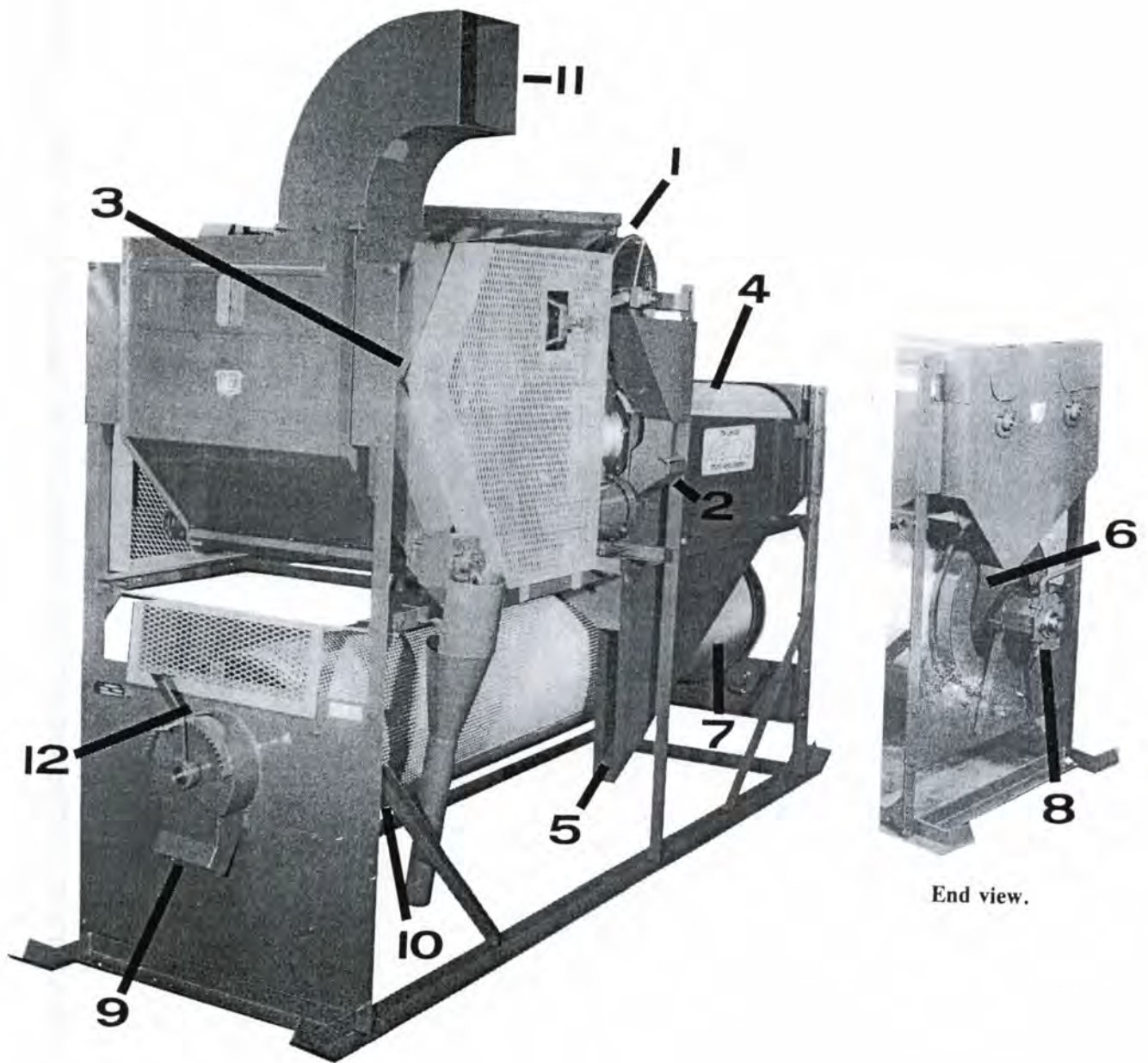
Gjesdal 500

FIVEinONE

**rotary
seed cleaner**

**Operator's
manual**





End view.

HOW THE ROTARY CLEANER WORKS

An auger draws the uncleaned grain from a bin or a truck box and moves it directly into the scalping drum (1). The speed of this 4½-inch auger and scalper determines the rate of flow through the cleaner.

The speed of the scalper can be adjusted from 30 to 60 rpm with an adjustable V-pulley and a spring-loaded idler pulley.

The grain enters the scalper in the centre where the desired grain drops through the perforations and material thicker than that desired comes out at the opposite end of this drum (2).

A paddle-type blower (3) draws air from under scalper and removes the lighter-than-desired material as the grain drops from the scalper to shells (4).

As the grain passes through these shells, the thinner-than-desired material is removed (5). The desired seeds now come out at end (6) and are fed into the indent shell (7).

The first 30 inches of this indent shell have small pockets

which remove the seeds that are shorter than the desired. These short seeds are dropped into an adjustable trough and augered out at point (8).

The remaining 60 inches of this indent cylinder have larger pockets which lift out the desired seed and reject the longer-than-desired seeds. The good seed drops into another trough and is augered out into the hopper (9).

The longer-than-desired material comes out at the bottom end of the shell (10). All the screenings come out in this area except for the shorts which are expelled at the end (8). Normally, a pail will take care of the shorts for an hour or two.

Air duct (11) can be set in four different directions. If the machine is set up indoors, it will have to be ducted outdoors.

An important zerk fitting (12) which rotates with indent drum is lubricated through ¾-inch hole. Rotate drum until fitting is turned up then lubricate. This is a bronze bushing and should be lubricated every 25 hours of operation—one or two shots only.

The purpose of this manual is to help you realize the benefits you expected when you bought my Five-in-One Seed Cleaner. The way you operate and the care you give this precision cleaner will have much to do with its successful performance.

This manual has been carefully prepared and the information arranged and illustrated to make it as easy as possible for you to find the information you need.

It will pay you to **read the entire manual from start to finish before** operating. Then keep it in a handy place for future reference.

Your United Grain Growers elevator manager or field representative will be glad to answer any further questions you may have on the operation or care of this cleaner.

Harvey Gjesdal
Box 425
Birch Hills, Sask.
SOJ 0G0

INTRODUCTION

The importance of clean seed has been recognized since the beginning of grain production. Uncleaned grain often contains a wide variety of weed seeds, off type grains, cracked and broken kernels, small stones and other material, as well as bits of straw and chaff. All of this material, commonly referred to as dockage, must be removed if the grain is to be used as seed.

To remove all "dockage" from a sample of grain, a number of cleaning methods must be used. A variety of cleaning equipment has been designed over the years, using different cleaning principles to perform very specialized cleaning functions.

Most will remember the fanning mills common on many farms years ago. These cleaners just could not remove all weed seeds from the grain sample.

The Carter Disc Cleaner came along in the late 1920's and was used extensively for cleaning wheat, with fairly good results, but, again, it could not separate all weed seeds. Its specific function was based on length separation.

The need to place several seed cleaning operations in series became evident. This has been done for years at commercial seed cleaning plants.

There are numerous advantages to on-the-farm seed cleaning. There are reduced trucking costs. There is no risk of introducing new weed seeds to your farm. There is no time spent waiting your turn at a cleaning plant. And there is better use of your time while your seed is being cleaned.

The Gjesdal Five-in-One Cleaner has incorporated five separate cleaning functions into one machine, making on-the-farm cleaning practical and equal to commercial seed standards.

It is designed to work as scalper, aspirator and grader. It uses slotted or round hole cylinder shells for thickness or width grading. The two-section indent cylinder makes two length separations in one pass through the machine.

The indent cylinder is often the most misunderstood cleaning function of this machine.

THE INDENT CYLINDER AND HOW IT WORKS

The cylinder is simply a thin-walled tube with indents formed from the inside to the shape approximating a hemisphere.

It is manufactured using a special steel which is precisely punched by a mechanical press to the desired indent. This is done when the material is in the flat sheet. The sheets are then rolled, hand-welded together and case hardened. It is this hardening of the cylinder that gives it extremely long life. The indent sizes are designated by given numbers and various sizes can be ordered to accommodate the grain being cleaned.

The indent cylinder is designed primarily to make a separation by length. In addition to the indent size, the cylinder uses the forces of gravity pulling the grain down and centrifugal force of the rotating cylinder pushing grain toward the outside as the cylinder rotates.

The Gjesdal Cleaner has two very distinct indent cylinders, a short one and a long one. Separate catch troughs are located in each. Screw-type augers carry the material falling into the troughs to opposite ends of the machine for discharge. The receiving troughs in the short and long indents operate independently of each other, and are adjusted separately.

The short indent: As the grain enters the short indent directly from the grader shells, the small, short seeds (often cracked kernels or weed seeds) which fit the small indents are carried up, being held in place by the centrifugal force of the rotating cylinder. The large kernels of grain not fitting into the indents tend to flow toward the bottom of the cylinder. When the cylinder reaches the point in the rotation where the centrifugal force can no longer hold the small kernel in place in the indents, the particles fall and are caught by the adjustable trough. These small seeds are then carried to the discharge spout by the auger.

The long indent: As the grain moves through the short indent without being picked up and discharged, it enters the long indent cylinder. The larger indents are designed to allow the desired kernels of grain to fit snugly, and be lifted up and carried higher than the more coarse material rolling in the cylinder. This grain remains in the indents until the cylinder reaches the point in its rotation, where the gravitational force pulling the kernel down is greater than the centrifugal force holding the kernel in place. By adjusting the long indent trough, the most desirable seed is caught and transferred to the clean grain discharge spout by the auger inside the trough.

By proper adjustments of the short and long indent troughs, the flexibility of the cleaning function of the indent cylinders is possible. *Any material left in the troughs after cleaning is completed can be cleaned out by adjusting the trough to the point where the material is dumped.* This is an important feature when switching from one grain to another or to a different variety.

PREPARING YOUR CLEANER FOR OPERATION

The cleaner must be set up on a level base. This is important so the correct slope of the scalper and indent drum is maintained.

It is important that all bolts or screws are checked before placing a new cleaner in operation to make sure they are tightened securely and have not worked loose during transit.

The standard 4½-inch x 10-foot feed auger is driven by the scalper drum. It is attached to the scalper assembly shaft by a collar, which is part of the top universal joint of the auger and which slips onto the assembly shaft. The "spider" in the scalper drum assembly meshes with the "forks" on the universal joint collar to provide a direct drive with the scalper drum. It is important that the universal slip joint lines up perfectly with the assembly shaft, and the spider and fork mesh correctly. If the alignment is not correct, the scalping drum will work up and down on each revolution when the auger is under load.

If the auger needs to be raised or lowered to properly align the shaft with the slip joint, carefully bend the auger support arms to accommodate this.

The feed auger must not be installed with the base lower than the base of the cleaner. If the auger base is lower than the cleaner base, the capacity of the auger will be greatly reduced.

If the auger base needs to be moved to the right or left to accommodate your cleaning arrangement, the holding bracket can be changed. However, it may have to be cut and rewelded. If this is a permanent cleaning arrangement, this modification may be necessary, but take care to assure that scalper shaft/universal coupler alignment is correct when the modification is completed.

The aspirator is equipped with a square air duct elbow which directs the spent air flow from the fan. This air duct can be attached four ways to direct the air flow in four directions. If additional duct work is necessary to vent the air out of a building or into a dust bin, an adapter is available which converts the square to a round pipe, allowing conventional round ducting to be used. Where a dust bin is used, a large air outlet from the bin is required so as not to restrict the flow of air from the cleaner.

To assist in keeping the grader shells clean, each cleaner is equipped with three small-diameter plastic pipes. These pipes are simply placed between the two grader shells which, as the cleaner operates, ride freely, applying a light pressure on the grader shells, pushing out any material that may be stuck in the grader shells. To prevent the pipes from bouncing over the top of each other, a small-diameter rod is placed inside the pipes, holding them in place.

If long extension cords are used to get electrical power to the cleaner, make certain they are of sufficient size to carry the load. Electrical cords which are too light can seriously damage the electrical motors.

SPEED

The speed of the cleaner is important. It can be adjusted to accommodate various grain samples. The ideal speed for the grader shells is 56 rpm. Some variation here is not critical. If large seeds, such as large barley or oats, are being cleaned, it may be necessary to speed up the *indent* to 60 rpm or more. If this causes too high a speed on the grader shells, it will be necessary to run the scalper drum at the regular speed and use a slightly larger pulley at the top of the indent drive to speed up the indent drum only.

The speed adjustment for the grader shells and the indent cylinder can be made by turning the Tee-handle (M) on the side of the cleaner opposite the feed auger. To check the rpm of your machine, simply mark one cylinder with a piece of tape and count the revolutions for one minute. It will be necessary to check the indent cylinder speed

periodically during operation to be sure the most desirable speed is maintained. If the speed is too fast, the cylinder pockets will have a tendency to lift the longer material. If the speed is too slow, the cylinder pockets won't lift all of the shorter material and the capacity will be decreased.

Normally, when cleaning wheat, an indent speed of 48 to 56 rpm can be used. For barley, the indent speed could probably be increased 54 to 60 rpm.

By doing some experimentation to find the correct speeds for your drums, a large variety of cleaning jobs can be done.

TARPAULIN COVER

If this precision machine is operated out of doors, always cover it when not in use with a tarpaulin. A combination of moisture, rust and wet dust will seriously affect the cleaner's operation.



An optional attachment is available which allows you to clean directly from a truck box. This attachment must be inserted in the truck end gate before loading, with the elbow turned up. When you are ready to clean, place an ordinary auger hopper at the base of the feed auger, hoist the truck box and turn elbow down into hopper.

FINDING THE IDEAL FLOW OF GRAIN

The flow of uncleaned grain into your Gjesdal Five-in-One Rotary Cleaner is regulated by the speed of the feed auger as well as an adjustable gate at the auger entrance.

An adjustable V-pulley (A) regulates the speed of the feed auger, which is coupled directly to the rotary scalper reel.

Choose a shell for the scalper that has holes just large enough to allow the desired seeds to fall through (see shell recommendations for various crops, page 7). Careful selection here is important for good-quality cleaning. If the holes are too large the seeds will all fall through in the first few inches of travel resulting in a poor aspirating job and it won't divide the flow of grain equally in the two grading shells.

If a shell has holes that are too small, good grain will pass through this shell and go out with the thicker-than-desired material.

The ideal hole size will carry the grain $\frac{3}{4}$ of the distance across this shell before all the desirable seed is dropped through.

A uniform current of air is drawn through the grain as it drops from the scalping shell to the grading shells, removing the light material. The air flow can be regulated by adjusting the air opening (B) at the discharge end of the cleaner.

The larger this opening is the less air will be carried through the grain stream and vice versa. Additional adjustment can also be made by regulating the fan speed by adjusting the V-pulley (C).

To make the most use of the aspirator, the air flow must be adjusted so a small amount of heavy grain kernels are drawn out with the light material. Air adjustment (L) is important. The gate can be adjusted up or down to close the air passage. The narrower this passage, the greater the air velocity through it which lifts the heavier material and discharges it out (D).

The flow of grain into the grader shells can be divided 50-50 by adjusting the control rod (E). Use inspection holes to check if equal amount of grain enters each drum.

As the main body of grain flows through the shells, the small weed seeds, pin oats, and other thin material drop through the perforations. The large grain left in the shells is carried on through and passed into the indent cylinder.

The first 30 inches of this indent cylinder has small pockets that will lift out the seeds shorter than the desirable seed. This section also has a separate conveyor trough which can be adjusted by loosening a wing nut (F) and regulating the lever (G).

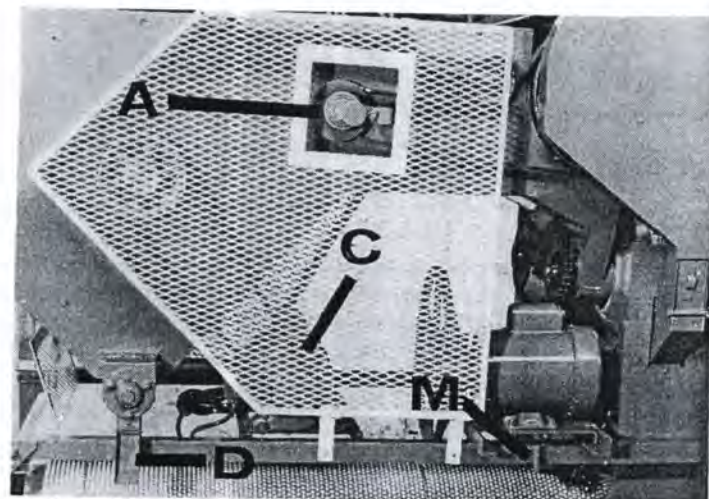
The cracked material that is picked up here is augered out at the same end where the grain enters (H).

Make sure the cylinder is rotating from 48 to 64 rpm and then adjust the conveyor trough with handle (G). If the short material that is lifted doesn't fall into the conveyor trough, the separating edge is set too high. Also, if good grain is carried into the trough, the separating edge may be too low.

It is important to wait about five minutes after an adjustment is made before any samples are taken for checking the separation.

The indent rpm must also be adjusted together with the troughs to obtain the best separation.

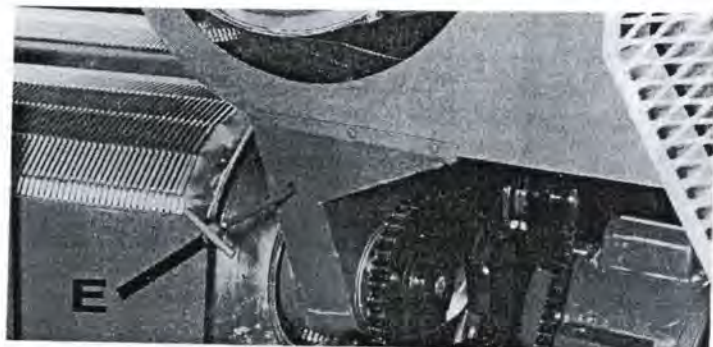
CAUTION. Be careful of moving parts. Don't place hands or lights inside the cylinder with machine running.



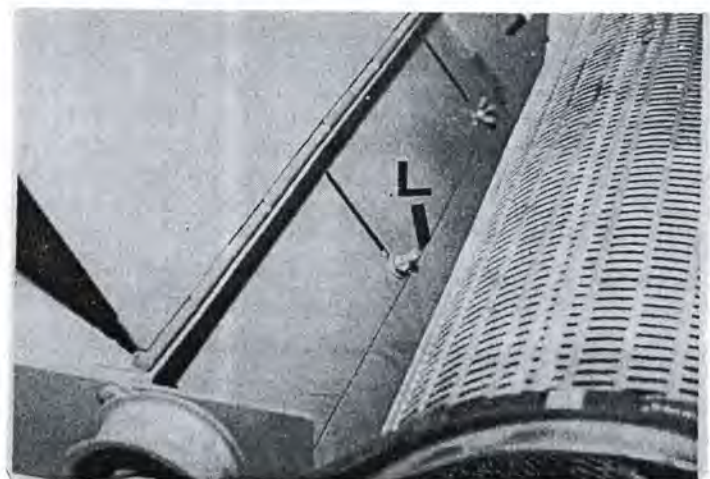
Adjustable pulley (A) to regulate rate of grain flow into cleaner. Pulley (C) to increase paddle blower. Heavy material from aspirator augered out at (D)(spout removed). Use T-handle (M) to adjust cylinder speed.



Air flow through scalper regulated by this adjustment (B).



To evenly divide flow of grain into each cylinder, control rod (E) can be moved in or out.



To change air velocity, the air baffle plate (L) can be adjusted up or down by loosening the two wing nuts.

The indent cylinder, which is in two sections, is mounted within the machine at a slight incline. When the short material has been removed, the grain moves toward the end with the larger pockets. The first section has a separate conveyor trough you can adjust by loosening nut and regulating the lever.

Much the same action takes place in the second section. Only this time the shorter material, the desired seed, is dropped into the conveyor trough and augered out at the clean seed end. This section also has a separate conveyor trough you can adjust by moving lever (1) to the desired notch.

The longer material remains in the bottom of the shell. It is discharged at the end of the cylinder.

An adjustable retarder has been provided at the end of the cylinder shell. Set it to hold a uniform bank of material within the cylinder. The cylinder pockets then have a better opportunity to pick out the shorter material.

The retarder is attached to the conveyor trough so, when the trough is turned upside down for cleanout, the retarder comes to the top allowing the cylinder to clean out. This retarder can be adjusted separately and should be checked once the trough has been adjusted.

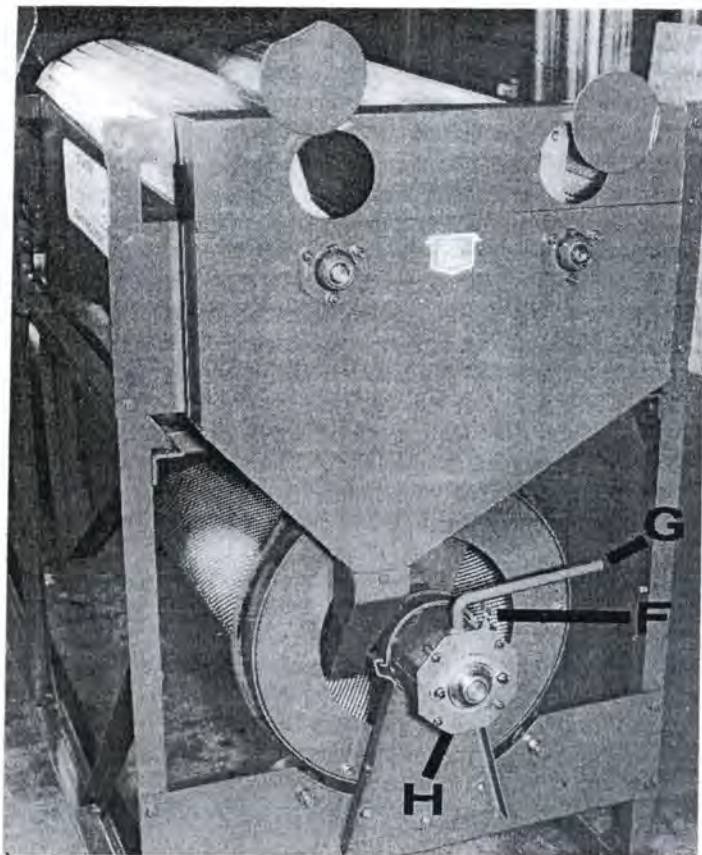
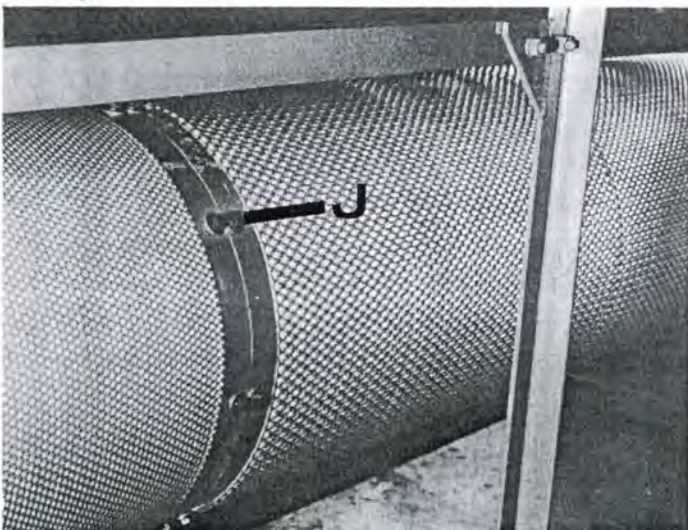
The indent cylinders can be separated where the two sizes meet by removing the cap screws (J). Many combinations are available from the factory to handle a wide variety of seeds.

SCREENINGS

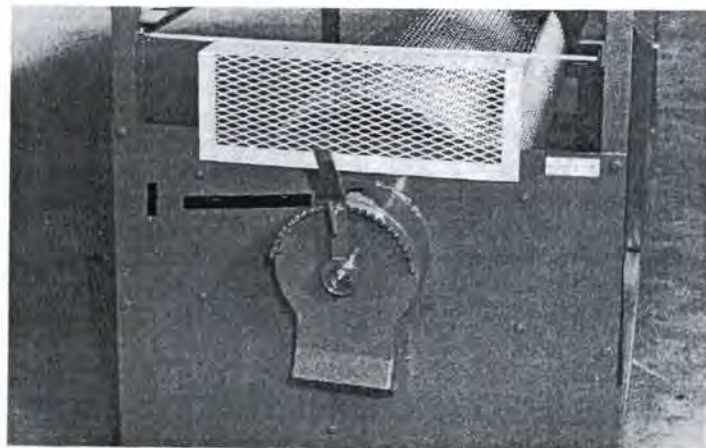
Screenings are fed out at five different points on this machine and in some types of seed you may actually have the seed fed out at one of these points.

For example, to clean rapeseed you might choose a round hole shell for the scalping shell just large enough to allow the rapeseed through. For the grader shells, choose a slot slightly narrower than the diameter of the plump rapeseed which will remove the seeds which are thinner than the plump rapeseed. Now, when the rapeseed falls into the indent cylinder, the cleaned seed will be picked up in the first section and augered out at point (H).

Any long material remaining in the cylinder will carry on to the large pocket section and be discharged as screenings. Many volunteer grains can also be separated from commercial grains and marketed for cash instead of losing it as dockage.



To adjust trough in small indent portion, loosen wing nut and adjust handle (G). Cracked material is augered out at (H).



The trough in final portion of the indent can also be adjusted. Move lever (I) to select the notch to give the best seed selection.

The large indent cylinder can be separated by removing cap screws (J) to allow various sizes of indents to be used.

DIFFICULT CLEANING JOBS

Comments from present owners of the Gjesdal Five-in-One Cleaner have been interesting, particularly in regard to those difficult cleaning jobs. Following are several such examples:

WILD OATS FROM OATS

To clean wild oats from oats, you must have a fairly plump variety like Rodney or Harmon Oats. This allows a good percentage of the slim wild oats to be removed by the grader shells.

Next, increase the speed of the indent shell to pick up all the oats that are the length of a good barley kernel. Any of the other oats that are the length of the large wild oats will then be thrown out with the wild oats.

This cleaning operation will give you 50 per cent or more screenings, but when you are cleaning at home, the screenings do maintain a good value.

WHITE CAPS

One customer found a way of removing every white cap from spring wheat. He speeded up the indent drum to 60 rpm or more, thereby picking up the wheat with the small pocket indent. The trough, in this case, was leaned well over toward the lifting side in the indent. This operation would normally be done when cleaning wheat a second time since, the first time through, the small indents would be used to remove cracked wheat, buckwheat and similar dockage.

WHEAT FROM BARLEY

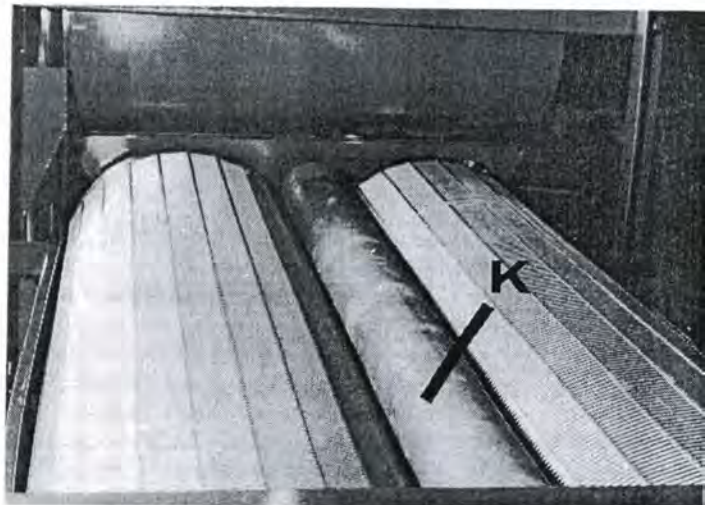
It was found that 100 per cent of spring wheat could be separated from barley. For this job, the indent was slowed to about 53 rpm and the large indent trough adjusted to pick up all the wheat. This included small barley or peeled kernels. In this case, the normal screening discharge port of the long indent becomes the barley discharge port and care must be taken to keep the barley separate from other screenings. The larger, desired barley drops out with the wild oats. To remove wild oats, the grain must be run through the machine a second time in the conventional manner.

The following are a few separations which have been made by owners of Gjesdal Cleaners and percentages of separation achieved:

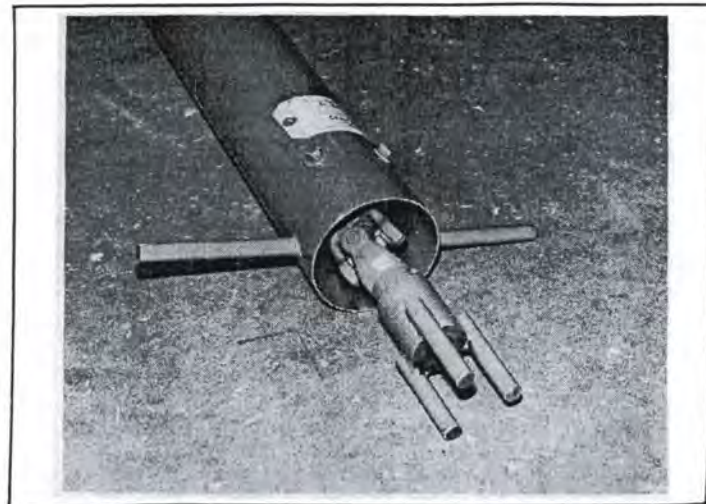
Separation	%
Wheat from barley	100
Barley from wheat	90
Oats from wheat	100
Wheat from oats	100
Flax from wheat, oats, barley, rye, rape and lentils	100
Rape from wheat, barley, oats, flax, rye	100
*Wheat, barley, flax and rye from lentils	90
*Rapeseed from tame mustard	80-90

*These crops need scalper and grader shell changes.

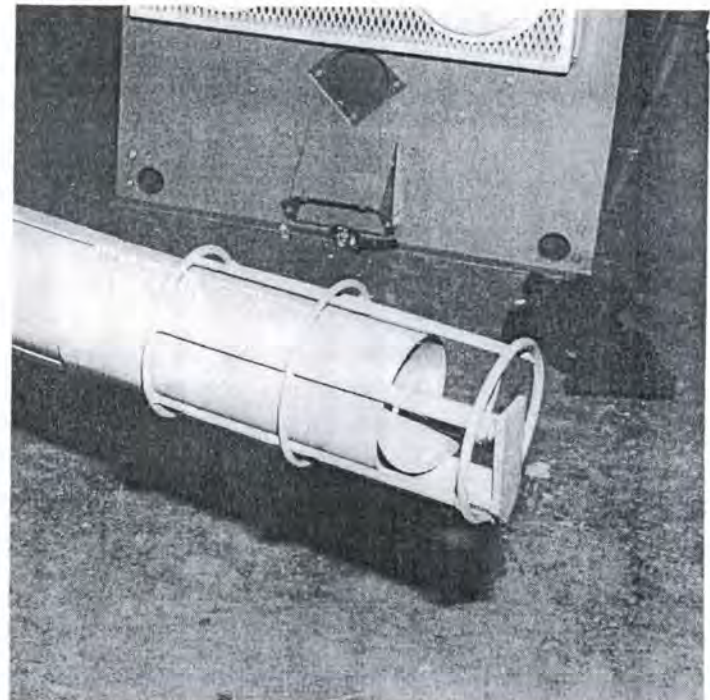
Remember: No two lots of seed are alike. The capacity of the machine depends on the amount of weed seeds which have to be removed. The cleaner the grain is, the easier it will be to process it for seed. Experienced seed growers all agree that the place to begin quality seed production is in the field.



For proper operation, roll (K) must be in place to knock seeds out of the screen.



The 4½-inch auger universal couples to the spider in the scalper drum and is driven by it. Below, the intake of the auger is protected by a guard. The opening can be varied to adjust the feed rate into the cleaner.

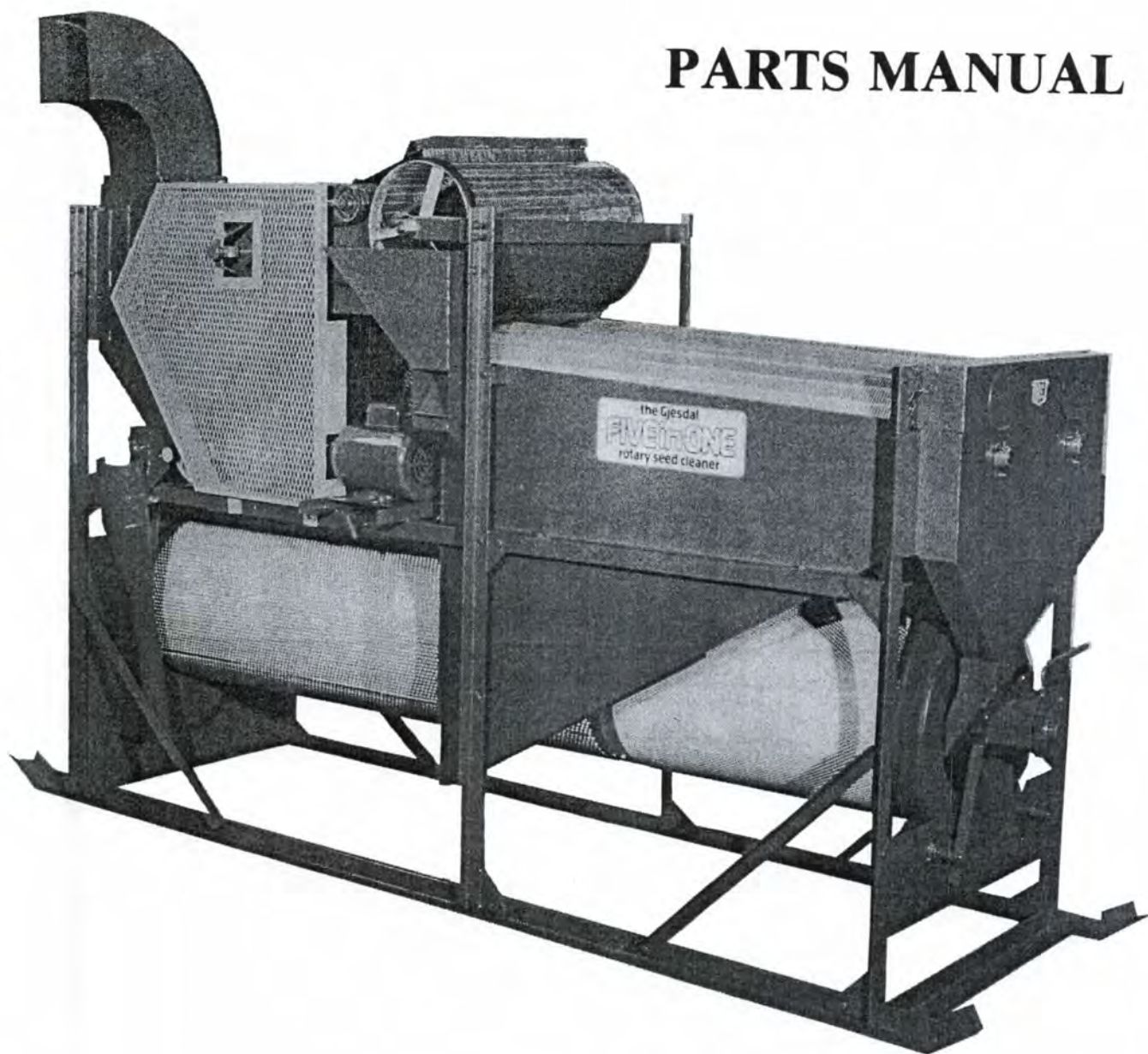


Gjesdal 500

FIVEinONE

**rotary
seed cleaner**

PARTS MANUAL



DRIVE SPECIFICATIONS

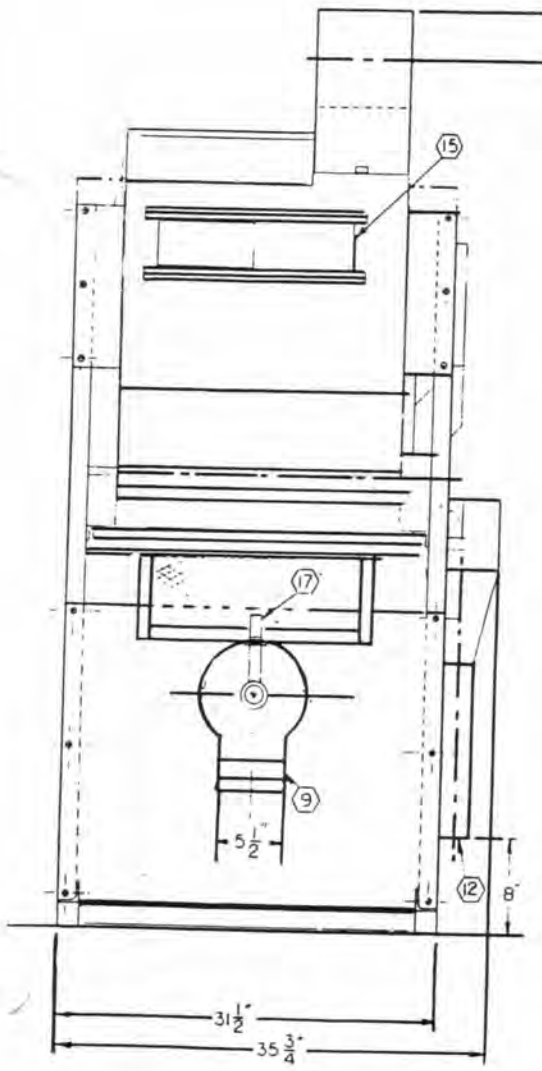
CAPACITY: 20 - 70 BUSHELS PER HOUR

SCALPER & FAN: ¾ HP, 1800 RPM MOTOR
1/60/115/230 V TEFC 56 FR

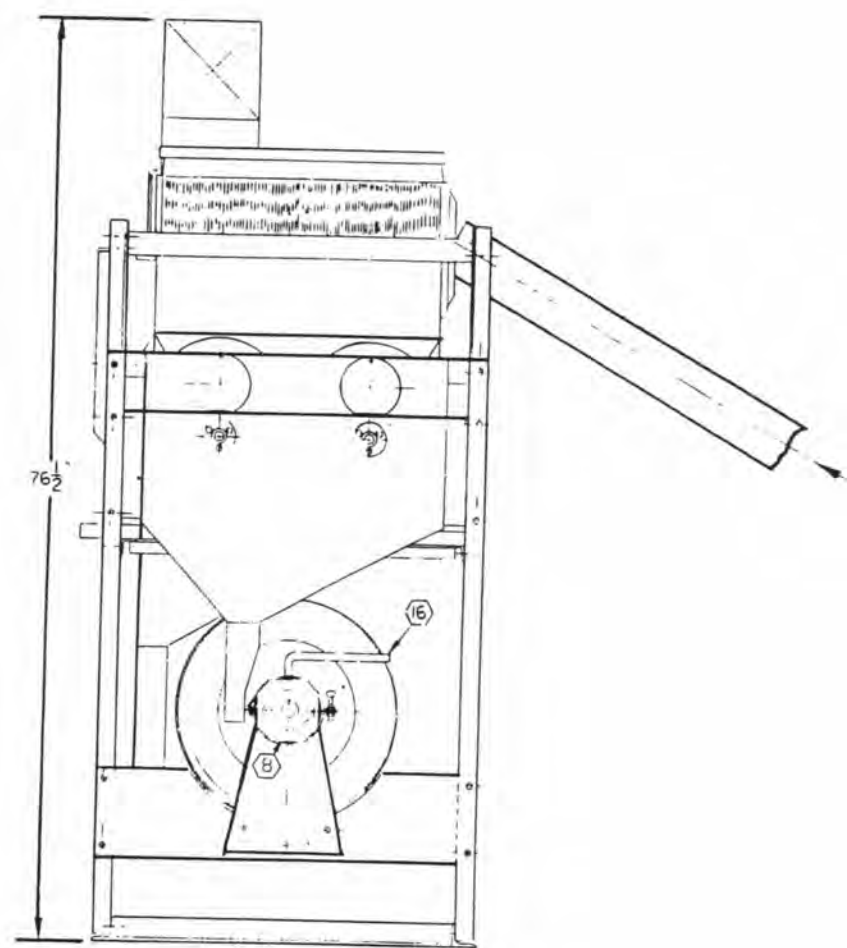
GRADER & INDENT: ½ HP, 1800 RPM MOTOR
1/60//115/230V TEFC 56 FR

SPEEDS: INDENT - 48 to 64 RPM
SCALPER ROLL - 30 RPM
FAN - 575 to 875 RPM
GRADER - 30 to 60 RPM

WEIGHT: 800 LBS.



CLEAN SEED END



SHORT SEED END

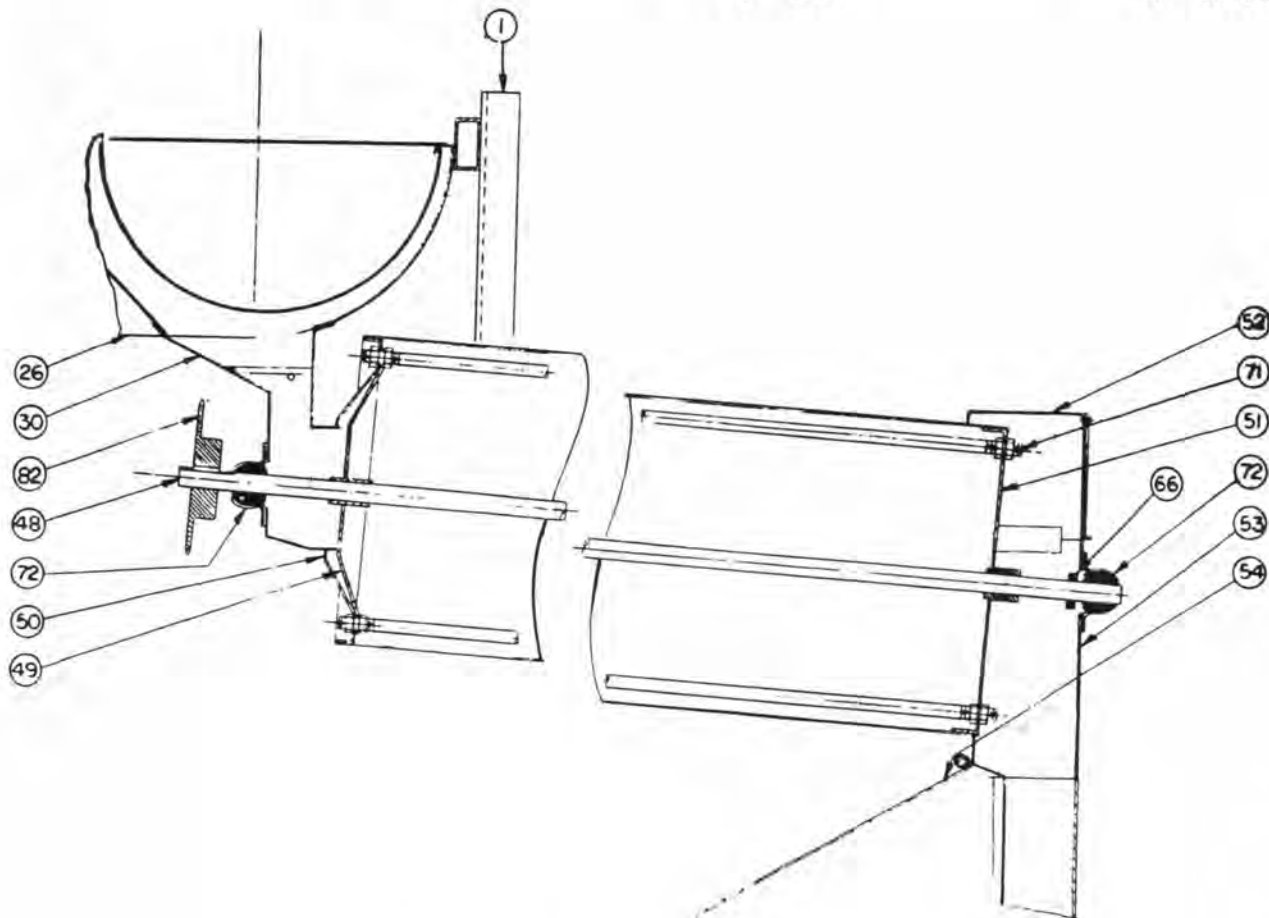
SECTIONAL ASSEMBLY

1 W13000
 2 W13011
 3 W13012
 4 W13013
 5 W13014
 6 W13016
 7 W13023
 8 W13026
 9 W13027
 10 W13028
 11 W13029
 12 W13033
 13 W13034
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 15 W13038
 16 W13039
 17 W13041
 18 W13042
 19 W13043
 20 W13044
 21 W13045
 22 W13046

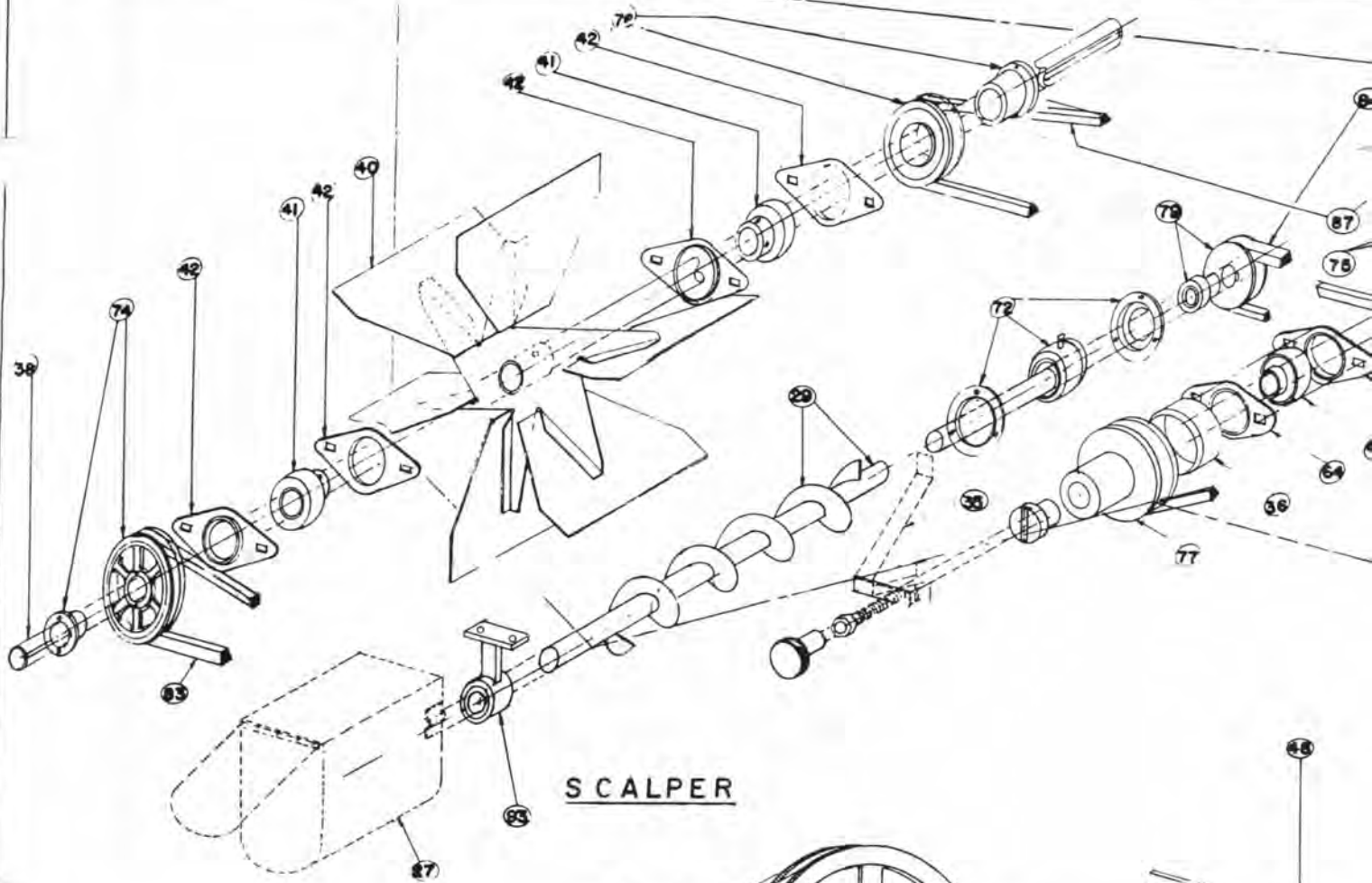
23 W13047
 24 W13048
 25 W13051
 26 W13052
 27 W13067
 28 W13068
 29 W13069
 30 W13073
 31 W13080
 32 W13081
 33 W13082
 34 W13083
 35 W13084
 36 W13085
 37 W13086
 38 W13087
 39 W13088
 40 W13089
 41 W13092
 42 W13093
 43 W13095
 44 W13096

45 W13097
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 64 W12819
 65 W12820
 66 1177W
 67 1561
 68 1678
 69 16932

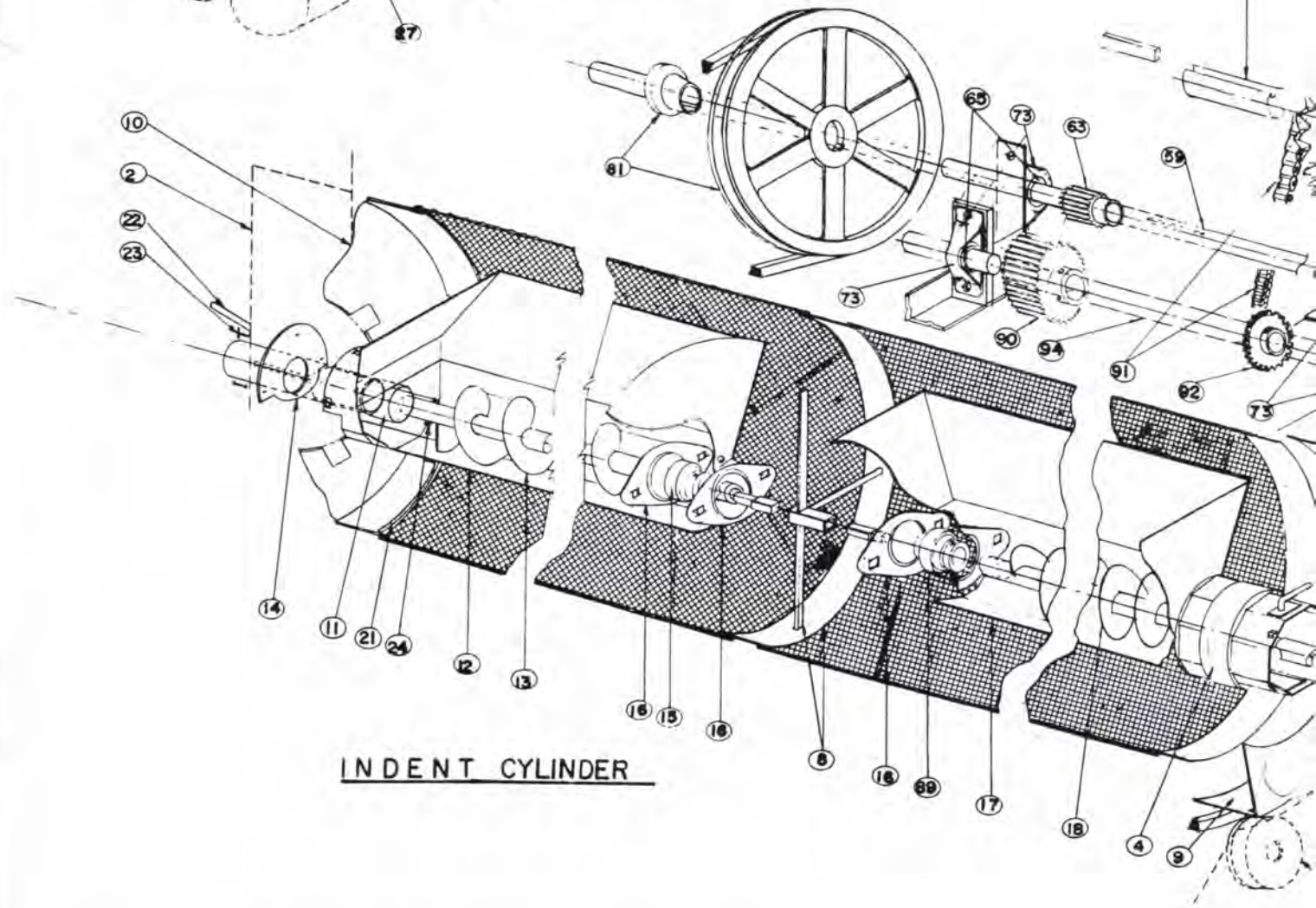
70 W13278
 71 20306
 72 S-1411
 73 W13050
 74 SH1AK61H
 75 SH1BK140H
 76 SH1BK40H
 77 SH1VP4MC12
 78 SH1B2212
 79 SH1BK30H
 80 SH1VP3410
 81 SH1AK144H
 82 W13205
 83 VBLTA49
 84 VBLTA51
 85 VBLTA64
 86 VBLTB69
 87 LBLTA115
 88 SH1B2612
 89 W13768
 90 W13128
 91 RC40BULK
 92 W13206
 93 W13383
 94 W13117



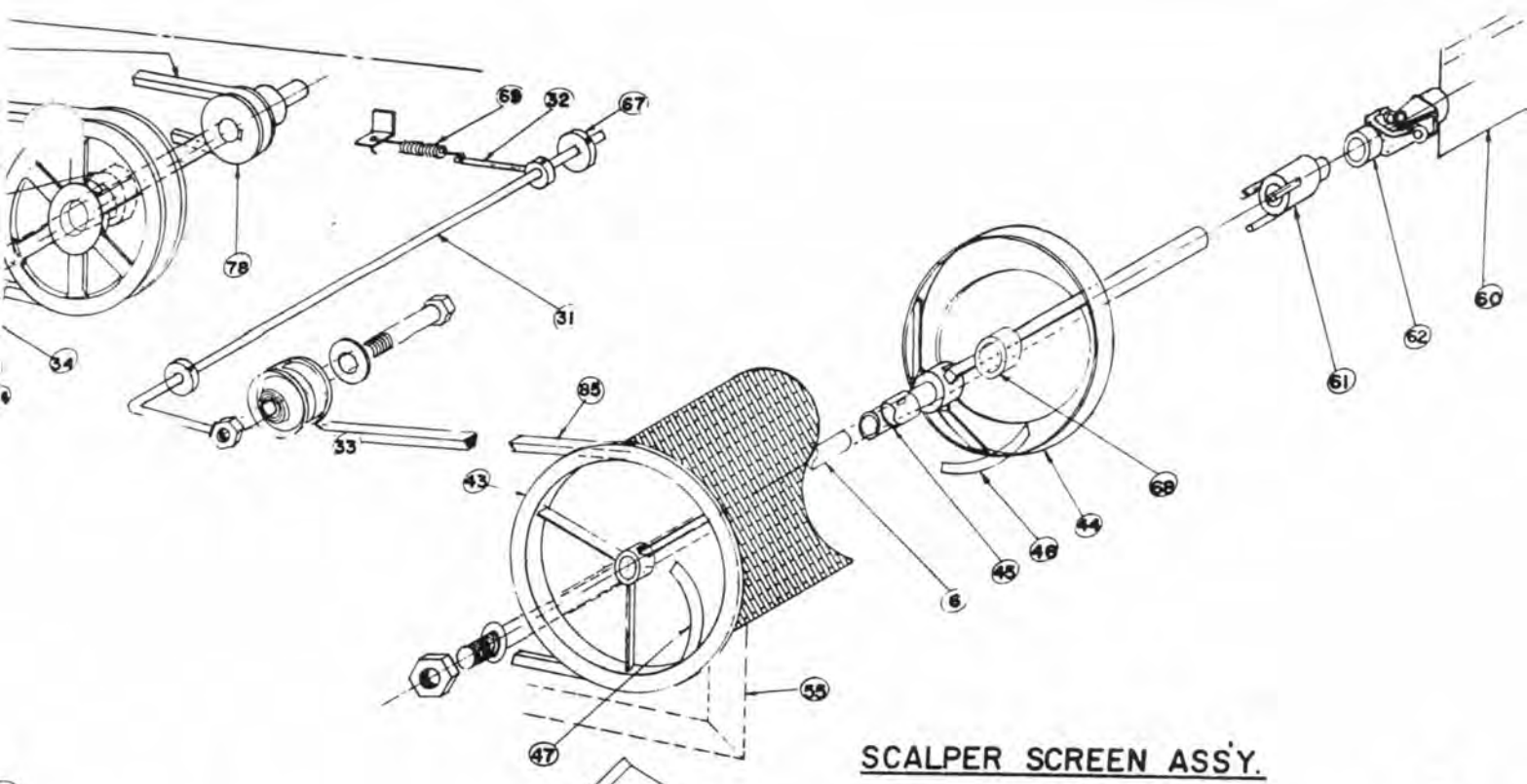
LEVEL 1: SECTION THROUGH GRADER.



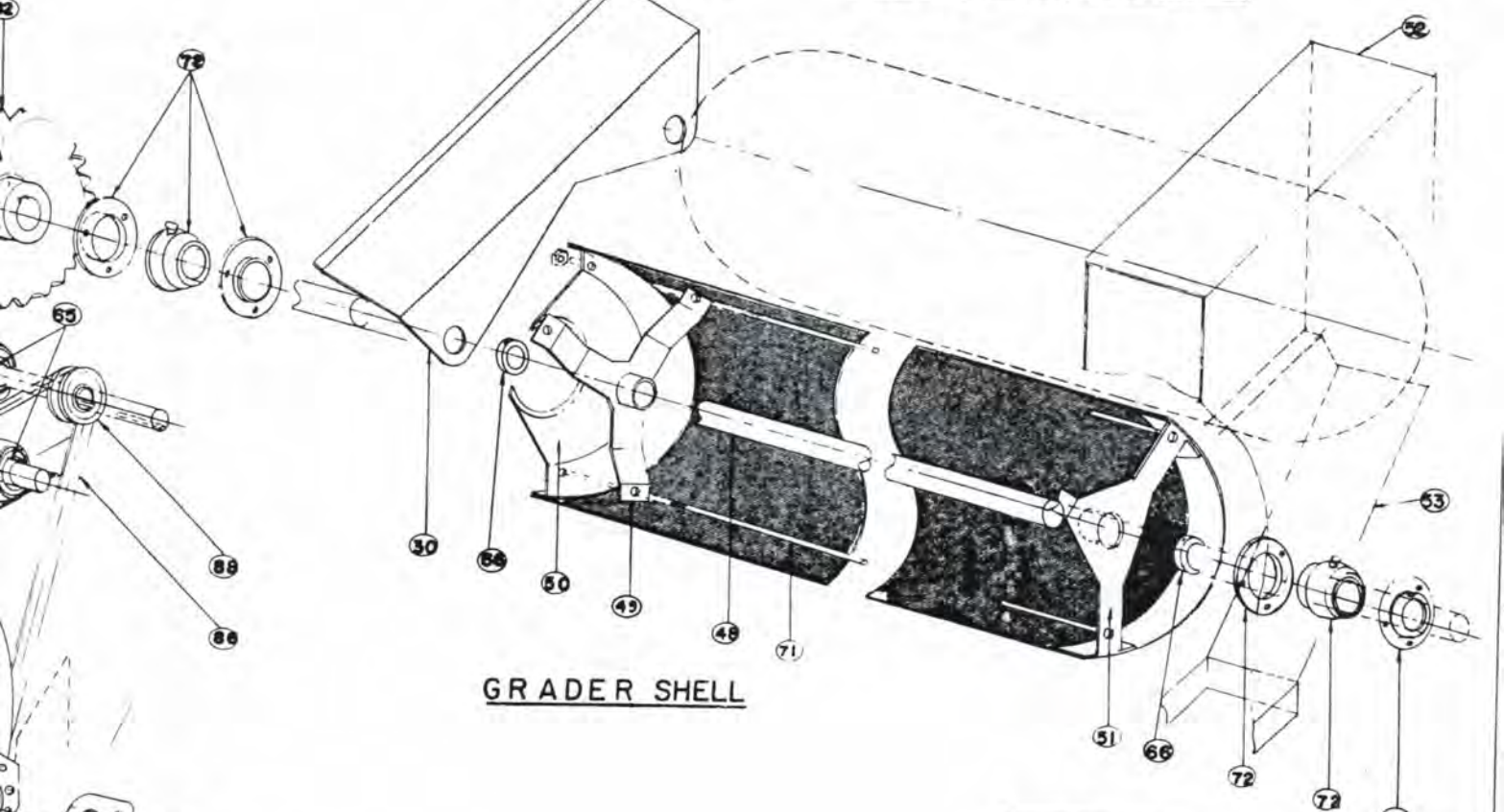
SCALPER



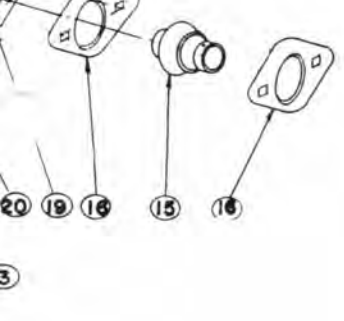
INDENT CYLINDER



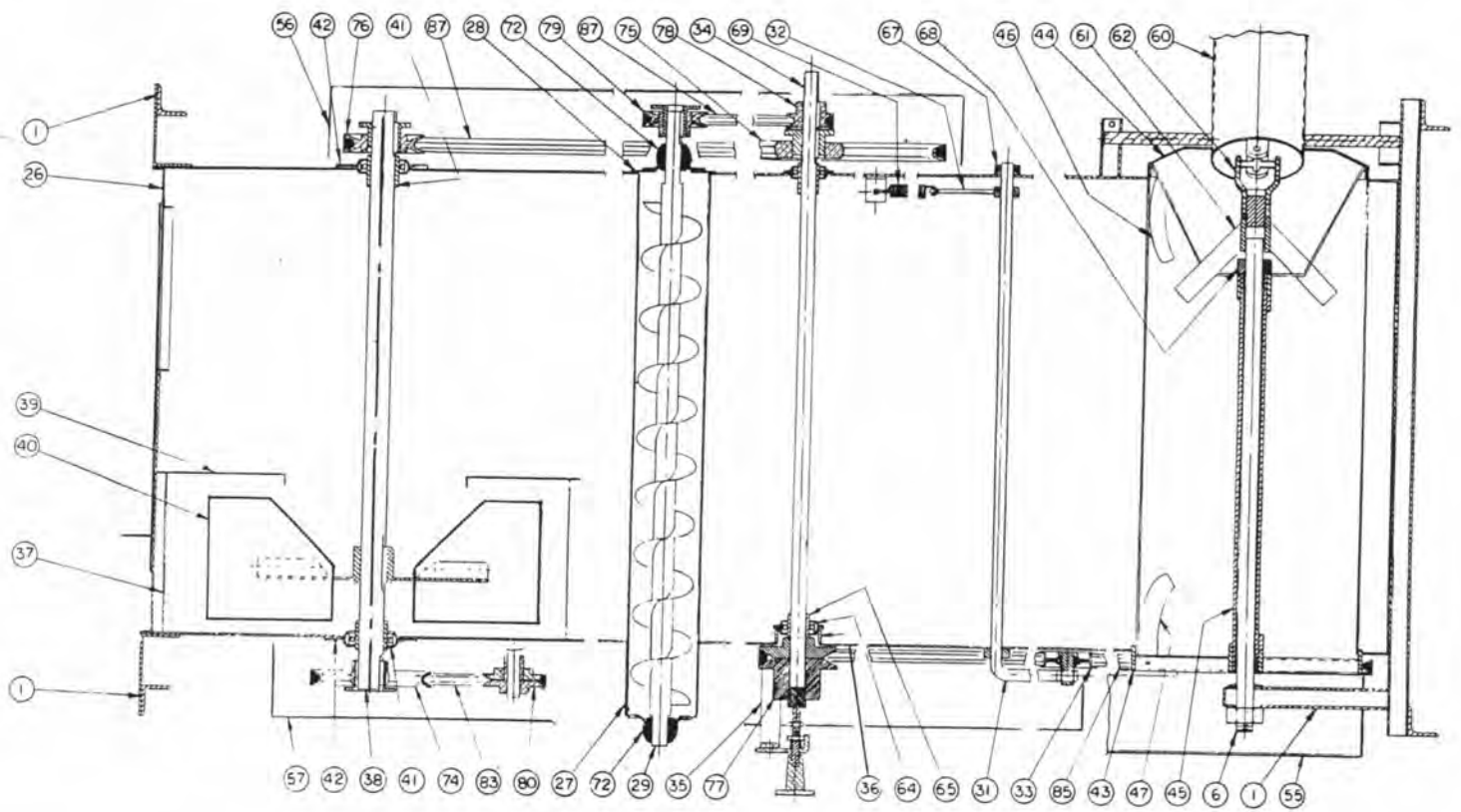
SCALPER SCREEN ASS'Y.



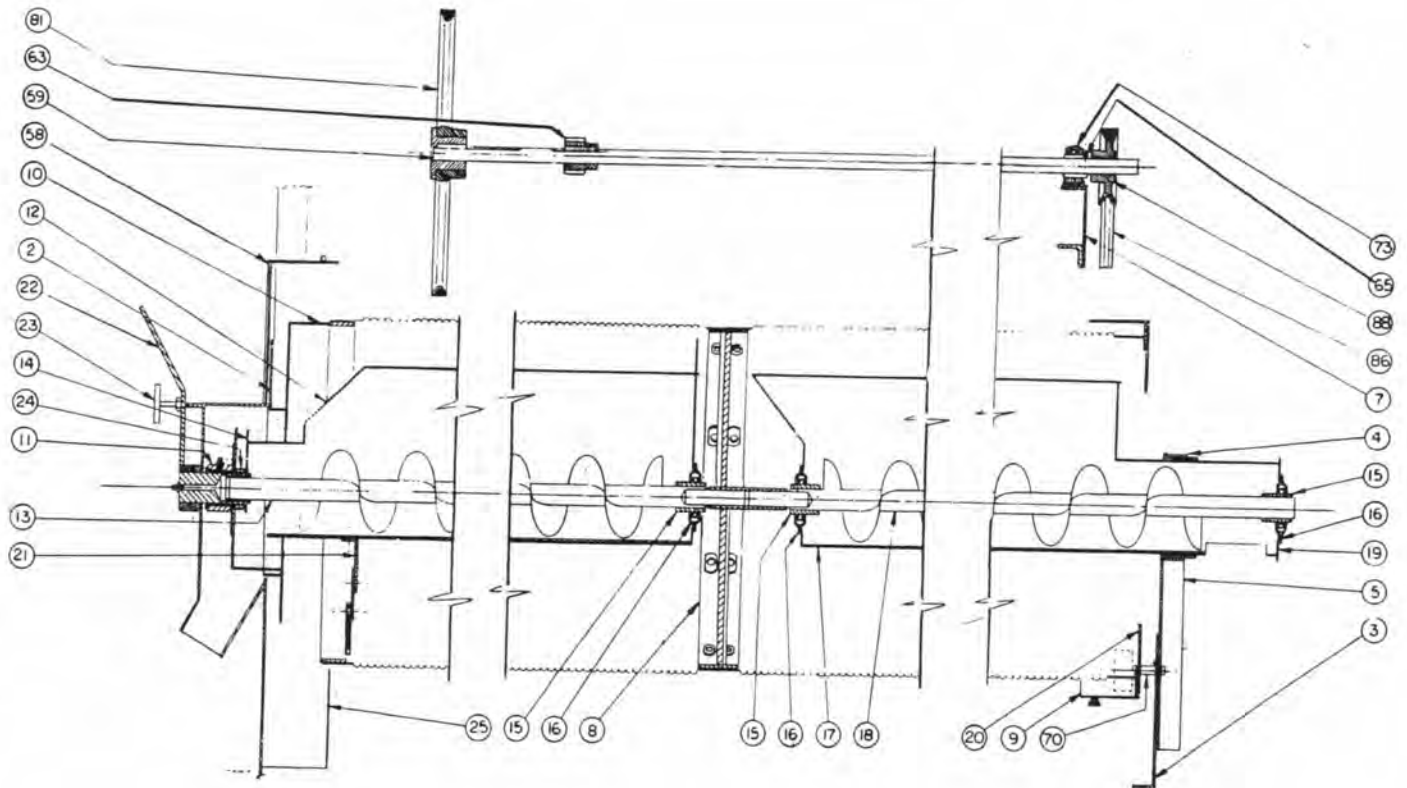
GRADER SHELL



ISSUE	REVISION	DATE	BY
GJESDAL CLEANER (STYLE C-GJA5)			
EXPLODED VIEW			
REF. DRG.			
CONTR. NO.	DATE	CEA-SIMON-DAY LTD Vancouver • Calgary • Winnipeg • Thunder Bay Toronto • Montreal	
DRAWN	DATE		
CHK'D	DATE		
ISSUED	DATE		
SCALE	BHT	DP	



LEVEL 2: SECTION THROUGH SCALPER.



LEVEL 3: SECTION THROUGH INDENT ASSEMBLY.

PARTS NUMBER AND DESCRIPTION

DWG. NO.	PART NO.	DESCRIPTION	QUANTITY PER UNIT	DWG. NO.	PART NO.	DESCRIPTION	QUANTITY PER UNIT
66	1177	COLLAR 3/4" BORE	2		W13037	BUSHING 1-1/400 x 1-1/16 ID x 3/4"	1
67	1561	COLLAR	2	15	W13038	BEARING RHP 1-1/16, 1030-1-1/16	3
68	1678	COLLAR 7/8"x2-3/16"x1/2"	1	16	W13039	FLANGETTE RHP SLFL 1-1/16	6
69	16932	SPRING TENSION	1		W13040	ASS,Y SCREW CONV. SHORT	1
70	W13278	TRUNION, COMPLETE	2	17	W13041	TROUGH SHORT CONV.	1
71	20306	CYLINDER ROD	6	18	W13042	ASS,Y SHAFT & FLIGHTING SHORT	1
	BUH12	BUSHING, BROWN, NO.H 3/4 BORE	3	19	W13043	PLATE END SHORT CONV.	1
	BUH19	BUSHING, H 1-3/16 BORE	2	20	W13044	PLATE END CYLINDER	1
	CGJA4SC	ASS,Y SCALPER GJESDAL C-GJA4	1	21	W13045	ASS,Y RETARDER	1
	CGJ10/64 SLT	SCLP SCALPER ASS,Y 10/64 SLOT	1	22	W13046	CONTROL LEVER DIS. END	1
	CJESDALMP	ASS,Y CGJA4 MACHINE	1	23	W13047	THUMBSCREW CONTROL DIS END.	1
87	LBLTA	LINK BELT A SEC 15L/FT.	115	24	W13048	SPACER DISCHARGE	1
	M.50F01056	MOTOR 1/2HP DOERR 1/60/115/180	1	73	W13050	PILLOW BLOCK RHP LPB 3/4"	4
	M.75F01056	MOTOR 3/4HP DOERR 1/60/115/180	1	25	W13051	SPOUT TAILINGS DISCHARGE	1
91	RC40BULK	ROLLER CHAIN NO.40	96	26	W13052	ASS,Y SCALPER BOX	1
72	S1411	MID FLANGE BRGS.	2		W13053	FEED PLATE	1
	SHHL3010	SHEAVE HI LO 30 5/8" BORE	1		W13054	PLATE FEED SIDE	1
81	SH1AK144H	SHEAVE 1AK144 H BUSHING	1		W13055	BRACKET AUGER MTG.	1
74	SH1AK61H	SHEAVE 1AK61 H BUSHING	1		W13056	BRACKET SCALPER MOUNTING	1
75	SH1BK140H	SHEAVE 1BK140 H BUSHING	1		W13057	BRACKET MOUNTING SPRING	1
79	SH1BK30H	BK30 H BUSHING	1		W13058	PLATE SIDE DRIVE END	1
76	SH1BK40H	SHEAVE 1BK40 H BUSHING	1		W13059	BRKT SCALPER MTG. R.H.	1
78	SH1B2212	SHEAVE 1BK24 3/4 BORE	1		W13060	PLATE BACK	1
88	SH1B 2612	SHEAVE 1BK28 3/4 BORE	1		W13061	EXTENSION BACK PLATE	1
80	SH1VP3410	SHEAVE VAR. PITCH 34 5/8 BORE	1		W13062	PLATE FRONT	1
77	SH1VP4MC12	SHEAVE 1VP4MC 3/4" BORE	1		W13064	COVER TOP	1
83	VBLTA49	V BELT A49	1		W13066	CONV. AIR LIFTINGS	1
84	VBLTA51	V BELT A SIZE 51" LONG	1	27	W13067	TROUGH CONV. AIR LIFTINGS	1
85	VBLTA64	V BELT A 64"	1	28	W13068	PLATE END CONV.	1
	VBLTB68	V BELT B SEC 68" LONG	1	29	W13069	SHAFT & FLIGHTING	1
	W10700	DOOR, CYLINDER INSPECTION	2		W13070	PLATE DIVERTER	1
	W12659	HUB IMPELLER	1		W13071	ROD DIVERTER	1
	W12660	SPIDER IMPELLER	1		W13072	TIE ROD SCALPER BOX	1
64	W12819	BEARING FLANGE RHP SLFL-3/4"	4	30	W13073	HOPPER FEED	1
65	W12820	BEARING RHP 1020-3/4 G	2		W13074	DIVERTER FEED HOPPER	1
1	W13000	ASS,Y FRAME	1		W13075	HANDLE DIVERTER	1
	W13001	FRAME BOTTOM	1		W13076	GATE AIR	1
	W13002	FRAME CENTRE	1		W13077	HINGE SECTION	1
	W13003	POST DISH. END FEED SIDE	1		W13078	PLATE BACK	1
	W13004	POST DISH. END DRIVE SIDE	1		W13079	BRUSH	1
	W13005	POST CENTRE FEED SIDE	1	31	W13080	ROD BELT TENSIONER	1
	W13006	POST CENTRE DRIVE SIDE	1	32	W13081	ARM TENSION SPRING	1
	W13007	POST FEED END FEED SIDE	1	33	W13082	IDLER PULLEY	1
	W13008	POST FEED END DRIVE SIDE	1	34	W13083	COUNTERSHAFT	1
	W13009	BRACKET SCALPER ROLL MTG.	1	35	W13084	BRKT. MTG. ADJUSTABLE SHEAVE	1
	W13010	BRACE CORNER	4	36	W13085	COLLAR SPACER	1
2	W13011	PLATE DISH. END	1	37	W13086	FAN SCROLL	1
3	W13012	PLATE FEED END	1	38	W13087	SHAFT FAN	1
4	W13013	BRKT. MTG. FEED TOP COLLAR	1	39	W13088	PLATE SIDE FAN	1
5	W13014	BRKT. MTG. FEED END BOTTOM	1	40	W13089	ASS,Y IMPELLER FAN	1
	W13015	THUMBSCREW	1		W13090	BLADE IMPELLER	6
6	W13016	SHAFT SCALPER ROLL	1		W13091	ELBOW AIR OUTLET	1
	W13017	SUPPORT FEED HOPPER FEED SIDE	1	41	W13092	BEARING RHP NO.1030 1-3/16G	2
	W13018	SUPPORT FEED HOPPER DRIVE SIDE	1	42	W13093	FLANGETTE RHP SLFE 1-3/16"	4
	W13019	BRKT DRIVE	1		W13094	ASS,Y SCALPER ROLL	1
	W13020	BRKT DRIVE SHAFT MTG.	1	43	W13095	DRIVE WHEEL	1
	W13021	BASE ADJUSTABLE MOTOR	1	44	W13096	FEED END SCALPER ROLL	1
	W13022	ROD MOTOR ADJUSTING	1	45	W13097	ASS,Y PIPE SCALPER ROLL	1
7	W13023	BRKT. DRIVE	1		W13098	PIPE SCALPER ROLL	1
	W13025	ASS,Y GJESDAL CYL. LESS SHELL	1		W13099	BUSHING RHP AA1108	2
8	W13026	HUB, CENTRAL DRIVE	1	46	W13100	BLADE INLET	3
9	W13027	COLLAR DRIVE	1	47	W13101	BLADE DISCHARGE	1
	W13028	END CYLINDER DISCHARGE	1		W13102	ROLLER	3
	W13029	ASS,Y BEARING DISH. END	1		W13103	SPOUT AIR LIFTINGS	1
	W13030	HOUSING BEARING	1		W13104	ASS,Y 245 SHELLS LESS SHELLS	2
	W13031	BUSHING RHP FF-1704-4	1	48	W13105	SHAFT CYLINDER DRIVE	1
	W13032	ASS,Y SCREW CONV. LONG	1	49	W13106	HUB RECEIVING HEAD	2
12	W13033	TROUGH LONG CONV.	1	50	W13107	HEAD CYLINDER RECEIVING	1
13	W13034	ASS,Y SHAFT & FLIGHTING	1	51	W13108	HUB DISCHARGE HEAD	2
14	W13035	BRACKET BRG. LONG CONV.	1	52	W13109	HOPPER TOP DISCHARGE	1
	W13036	HOUSING BUSHING	1	53	W13110	BOTTOM HOPPER DISCHARGE	1

DWG. NO.	PART NO.	DESCRIPTION	QUANTITY PER UNIT
	W13111	SPOUT FEED CYLINDER	1
54	W13112	SPOUT THRU DISCHARGE	1
55	W13113	SPOUT SCALPER ROLL DIS.	1
56	W13114	GUARD FEED SIDE	1
57	W13115	GUARD DRIVE SIDE	1
58	W13116	GUARD DISCHARGE END	1
94	W13117	SHAFT SHORT	1
59	W13118	SHAFT DRIVE LONG	1
	W13119	ASS,Y AUGER	1
60	W13120	TUBE	1
	W13121	ASS,Y SHAFT & FLIGHTING	1
	W13122	ASS,Y HANGER BEARING	1

DWG. NO.	PART NO.	DESCRIPTION	QUANTITY PER UNIT
	W13123	HANGER	1
	W13124	BUSHING RHP AA-1212-2	1
61	W13125	SPIDER DRIVE LINK	1
62	W13126	1"x1' DIA. UNIVERSAL JOINTS	1
	W13127	GUARD AUGER	1
90	W13128	MITRE GEAR NSS1036 3/4" BORE	1
63	W13129	MITRE GEAR NSS1015 3/4" BORE	1
82	W13205	SPKT R40B35 3/4" BORE	2
92	W13206	SPKT. R40B14 3/4" BORE	1
	W13213	STRAIN RELF CONN.T&B NO. 2521	2
	W13236	DECAL GJESDAL CAUTION	1
	W4681	SPROCKET 40C17 IDLER	1
93	W13383	ASS,Y — HANGER BRG.	1
89	W13768	BEARING, RHP 1 1/4" EXTENDED	1