



**INSTRUCTIONS
AND
PARTS LIST**

No.245 CARTER

SEED CLEANER

No.W106

SIMON-DAY LTD.

WINNIPEG, MANITOBA



INSTALLATION AND OPERATION
NO. 245 CARTER SEED CLEANER, STYLE C-ACK 2

INSTALLATION AND DATA

The No. 245 Carter Seed Cleaner is designed to operate as a scalper, aspirator, and grader, using slotted cylinder shells for thickness, or round hole perforated shells for width grading.

The machine is of medium weight, and operates without vibration. It should be raised three feet above the cleaner floor to allow the discharge spouts to be attached. It is very important that the machine be placed on a solid structure and securely fastened. Holes have been provided in the base of the legs for fastening. The machine must be set level and all moving parts operating freely. Sufficient room should be allowed for moving around the machine. Five feet should be allowed at the discharge end for the removal of the grading shells.

The No. 245 Carter Seed Cleaner is shipped completely assembled, except for the "overs" spout which has been removed for shipment. The "thrus" spout is an extra, or supplied with an elevator when the elevator is purchased with machine.

SPEED

The efficiency of the machine is governed to a large extent by the speed. **Depending on the** type of grain being cleaned, the normal speed range of the grading shells may vary. The normal speed range of the main drive shaft is 875 to 910 r.p.m. The normal speed range of the grading shells is 48 to 56 r.p.m. The speed of the main drive shaft and fan can be changed by adjusting the variable pitch pulley on the motor. Another adjustable pitch pulley is provided to alter the speed of the scalper reel and grading shells. These provisions are necessary to permit the operator to adjust the speed of the shells independent of the speed of the fan.

A 3/4 H.P. motor is required to operate this machine without elevators. Depending on the length of elevator or elevators, extra power is required when they are being driven from the No. 245 Carter Seed Cleaner.

FLOW OF GRAIN

The grain flow of the No. 245 Carter Seed Cleaner is very simple. The separate stages of cleaning are scalping, aspirating, and then grading. As the grain leaves the feed hopper, it flows into the rotary scalper reel. Straws, stones, sticks, and other coarse material are removed. The main flow of grain is then distributed into the suction air chamber. Aspiration takes place where the grain leaves the seal gate in an evenly spread stream through which a uniform and effective current of air is drawn. The light material is carried by air to the expansion chamber. Rapid expansion of air in the settling chamber allows the screenings to drop to the bottom where they are discharged from the machine by a screw conveyor. The main body of grain, with the light material removed, flows into the grading shells. These shells have spiral grooves with perforations which provide separating and sizing to degrees of exactness and uniformity heretofore unobtainable in an agricultural machine. 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 discharged out the end of the machine.

FEED CONTROL

The feed gate thumb screws (A) are adjustable, regulating the amount of grain being fed to the scalper reel.

The feed valve control lever (B) regulates the level of grain behind the scalper reel. For best results, the feed valve control lever (B) should be adjusted to maintain the highest possible level of grain behind this reel.

The air seal valve (C) situated below the feed valve control lever (B) regulates an even flow of grain through the air suction before it passes into the grading shells. After the grain is flowing through the machine, the circular weight should be moved to a position on the arm where it will maintain a slight pressure against the stream of grain. If no pressure is maintained all of the light material will not be removed by air.

There are six circular air vents located on top of the machine, four of these vents are operated by the air control lever (D). When these vents are opened, a minimum amount of air passes through the grain in the machine. In the event of cleaning flax, when the adjustment at air control lever (D) is not sufficient, open the other two circular vents.

SERVICE

The No. 245 Carter Seed Cleaner does not need a great deal of attention, but a periodic inspection should be made when it is in operation. This machine has factory sealed ball bearings and bronze bushings. The oil reservoirs on the bronze bushings should be kept full of SAE20 oil. A small quantity of grease should be applied to the gears at the drive end of the shells, to permit smoother running and quieter operation.

A roller with five heavy rubber blades has been provided above and between the cylinder shells and runs continuously to keep the perforations clean. This complete rubber blade assembly can be adjusted up or down a slight amount so that the rubber blades are tapping the cylinder shells, keeping them clean. It is recommended that these rubber blades be checked occasionally.

When cleaning various types of grain such as wheat, barley, flax, etc., different sizes of perforated shells are required.

A clean-out door has been provided under the expansion chamber conveyor which should be dropped occasionally to remove the accumulation of dust, small seeds, buckwheat, pin oats, etc. This can be done from the discharge end of the machine, by reaching in under the fan housing alongside the motor, and pushing down on the lugs provided to keep the clean-out door closed. When this is done the machine should not be in operation.

CHANGING CYLINDER SHELLS

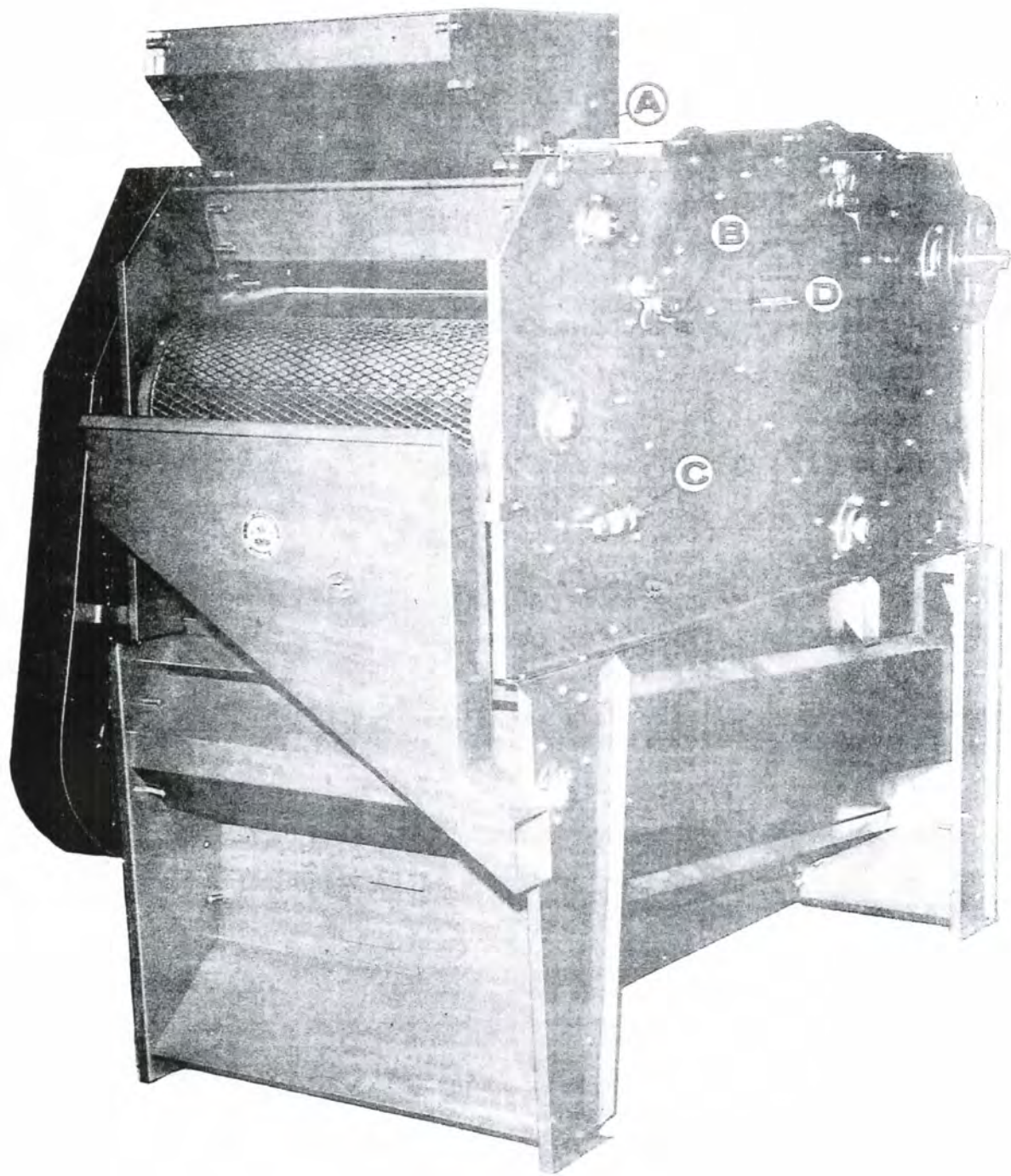
Whenever the cylinder shells are to be changed in this machine, it will be necessary to do some dismantling. These instructions should be read thoroughly before this job is started. The following parts must be removed:

1. Remove the six nuts and bolts located at the discharge end on both sides of the machine. These nuts and bolts hold the discharge end panel with handle.
2. Remove the end panel with handle.

3. Withdraw the complete shells with castings and tie rods.
4. Loosen and remove set collars located on the discharge end of each shell.
5. Remove the three screws from the discharge end casting on each shell.
6. Remove the discharged end casting from the shell. Do not remove tie rods.
7. Reverse procedure outlined above to assemble new shells.
8. When replacing shell assemblies in the machine, the inspection plate at the feed end has to be removed so that the feed castings can be guided by hand on to the stub shafts. Each shell is then rotated slowly to make sure the pin in the stub shaft engages the groove in end castings.
9. Replace the end panel at discharge end.

LABORATORY SERVICE

A free laboratory service is maintained by the Company in order to determine the proper size of shell required to clean various types of grain. It is necessary to send a three pound sample of the grain to be cleaned, together with information as to types of equipment currently in use, in order that we may determine the proper size of shells required.



REPAIR PARTS FOR NO. 245 CARTER SEED CLEANER

SCALPER - STYLE C-ACK1

| <u>PART NO.</u> | <u>CAST NO.</u> | <u>DESCRIPTION</u> |
|-----------------|-----------------|--|
| 20229 | HC3117 | Scalper Roll End |
| 20210 | B13 | Fan Hub |
| 15758 | HC2641 | Control Knob |
| 17141 | HC2856 | Control Knob |
| 20260 | HC2642 | Control Knob |
| 1111 | CM829 | Quadrant |
| 20265-A | BK36 | V-Pulley 1-3/16" |
| 20264-A | BK80 | V-Pulley 1-3/16" |
| 20116-A | AK71 | V-Pulley 3/4" |
| 14078-A | BK130 | V-Pulley 3/4" |
| 20227 | | Conveyor Shaft with K. S. |
| 20228 | | Fan Shaft with 3 K. S. |
| 20225 | | Scalper Roll Shaft with K. S. |
| 20252 | | Scalper Roll Screen |
| 20251-A | | Flexible Spout for Scalpings Liftings |
| 979 | | 3/8 x 15/16 x 3/8 Set Collar |
| 20246 | | Rubber Strip |
| 20273 | | Nylon Bearings |
| 16536 | | 1-3/16 S.K.F. Bearing |
| 20261 | | Conveyor Flighting with dogs |
| 20227w/20261 | | Shaft and Conveyor Assembly |
| 15880 | | Cogs for Feed Gate |
| 20255 | | Fan Assembly with Hub |
| | 1VM34 | Adjustable V-Pulley 3/4" bore |
| | | 65 Link "A" Section Belt to Drive Scalping Roll |
| | | 51 Link "B" Section Belt for Motor Drive |
| | | 67 Link "B" Section Belt to Drive Conveyor Shaft |
| | | 105 Link "B" Section Belt Conveyor Shaft to gear Drive Shaft |

MACHINE PROPER

| | | |
|---------|--------|--|
| 18378 | HC2972 | Bearing Flange |
| 20215 | HC3116 | Bearing Flange |
| 20283 | HC2172 | — 17T Mitre Gear 3/4" Bore (C.S.) |
| 20283A | HC2172 | — 17T Mitre Gear 3/4" Bore (S.S.) |
| 20211 | HC3010 | Cylinder Discharge Head |
| 20213 | HC2758 | — Receiving Head Hub |
| 16170 | HC2750 | Roller Blade Hub |
| 20247-A | AK32 | Sheave 3/4" Bore |
| 14078-A | BK130 | Sheave 3/4" Bore (2 S.S.) |
| 20221 | HC3118 | Feed Spout (Less Bushings) |
| 20301 | | Gear Drive Shaft 3/4 x 30-1/4" with K.S. |
| 20308 | | Rubber Roller Blade Shaft 3/4 x 48-1/2" |
| 20292 | | Stub Shaft Assembly (F.E.) 3/4 x 8" |
| 20284 | | Stub Shaft (T.E.) 3/4 x 4" |
| 20304 | | Cylinder Receiving Head |
| 20286-A | | Hopper for Throughs |
| 20290-A | | Swivel Spout for Overs |
| 1177 | | 3/4 x 1-7/16 x 5/8" Set Collars |
| 16179 | | 6-1/2 x 5 x 1/4 Felt Washers |
| 20273 | | Nylon Bearings |
| AA839-6 | | Oilite Bushings |
| 20212 | | Rubber Blades (Five required) |

ADDITIONAL PARTS FOR C-ACK 2

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|--------|-------------------------------|
| S-1413 | Shaft, Conveyor |
| S-1407 | Shaft, Feed Roll |
| S-1403 | Sprocket 17T |
| 19566 | Sprocket 48T |
| S-1411 | Bushing, Bronze, with oil cup |
| 17517 | Bearing, Ball 1 1/16" |
| 16536 | Bearing, Ball 1 3/16" |
| 16901 | Bearing, Ball 3/4" |

All other parts are available and can be supplied providing we have the style and serial No.'s of the machine and a reasonable description of the part.

