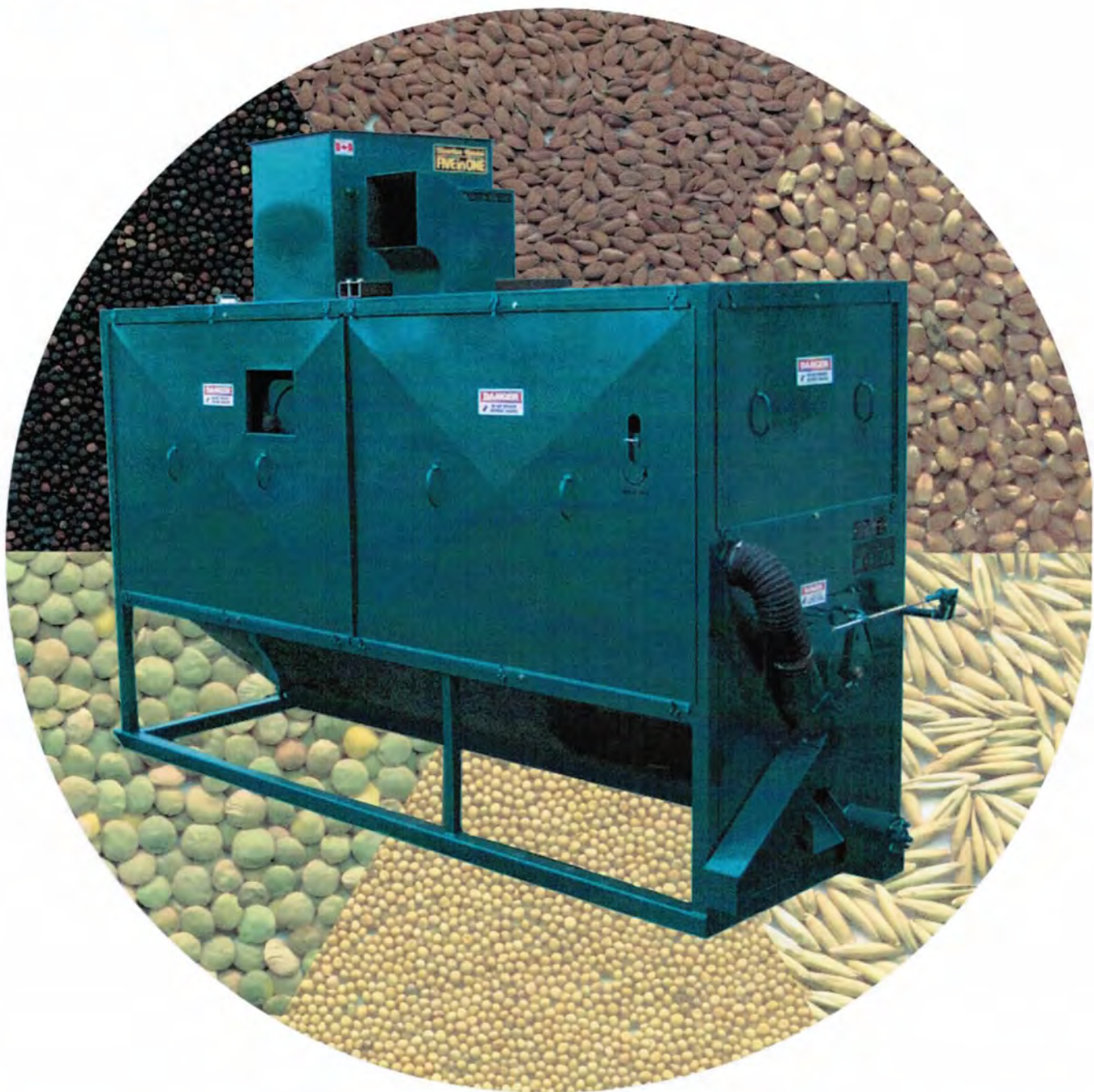


Gjesdal **FIVE in ONE** GRAIN CLEANERS

Simplifying the World of Grain Processing

M400X



A SEED CLEANING PLANT ALL IN ONE MACHINE*

NOTICE TO BUYERS

Thank you for your purchase of one of the finest grain cleaners on the market. A working partnership relationship is what we strive to achieve with each and every customer.

Flaman Sales Ltd. shall limit the warrant of items sold to the amount of the purchase price. Flaman Sales Ltd. our employees or representatives, make no other warranties; guarantees or conditions; expressed or implied with respect to this machine or its performance.

By acceptance of this machine the original Purchaser acknowledges that this warranty and disclaimer herein before described are conditions of sale and that they constitute the entire agreement between the Vendor; Flaman Sales Ltd. and the original Purchaser regarding warranty and / or any other liability or conditions.

The original Purchaser shall have 10 days after purchase date to accept this machine or advise Flaman Sales Ltd., in writing, of any disagreement. NO warranty will cover misuse or damage in any way and any machine may not be accepted for return which is not returned in factory original condition.

ATTENTION

All warranties expressed or implied will be null and void if any other than Flaman Sales Ltd. parts, components or accessories are used in Gjesdal grain cleaning units. Flaman genuine parts, components and accessories are available by, order call 1-306-726-4403 Southey or 1-306-934-2121 Saskatoon.

Flaman Sales Ltd. our employee's or representatives of the corporation will not be held accountable, liable or responsible due to damage and/or poor performance caused by the use and/or installation of non-authentic Flaman Sales Ltd. parts and screen accessories.

M-400X Start up

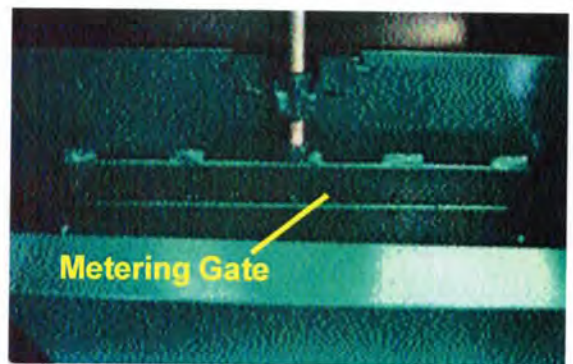
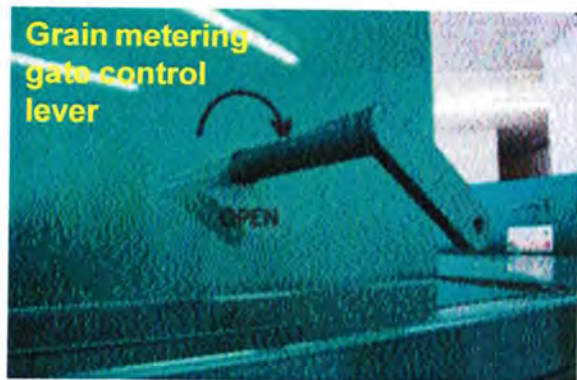
NOTICE: Please read the instruction manual entirely before Starting your unit. Understand and locate all danger and caution labels on the unit. Take note of all warnings in this instruction manual.

1. Enter product into the product hopper on the top of the unit. Make sure that the metering gate is closed.
2. Start the unit. The indent and grader drum should be rotating at a speed of 54 to 58 RPM if you are cleaning cereal grains. The speed adjustment is on the left hand side of the unit from the indent out-feed end. The rotation of the drum from the indent out-feed end should be **clock-wise** (the end with the flow retarder and the indent trough adjustment arm). A simpler way to check that the unit is running in the right direction is to make sure that the fan is blowing air not suction.
3. Set the air suction on the unit. The air valve for the dust control air in the unit is located on top of the primary air duct inside the unit beside the fan housing. Have this valve in the most open position (the adjustment lever will be parallel with the pipe).
4. Set the final air suction. The adjustment lever is located on the underside of the primary air duct directly below the receiving hopper air adjustment lever. Set this lever about half way open. This adjustment will be set at a position that you think is right.
5. The primary air suction adjustment lever is located on the left hand side of the unit from the indent out-feed end. The adjustment knob is located around eye level height. There is a cut out on the guard door for this adjustment. Have the primary air in the most off or closed position when starting. Once you have product flowing through the unit you can start opening up the primary air. Open the primary air just until you hear grain beginning to go through the fan. Close the primary air just a bit from this point. This should have the air set for the unit.
6. Introduce product to the unit. Open up the metering gate a little at a time ($\frac{1}{2}$ turn).
7. The product will flow into the scalper shell. Accept product will drop through the shell and down into the grader and indent drum. The tailings or larger coarse material will flow out the end of the scalper drum and down into the screenings chamber. If accept product is flowing through the scalper drum then, either the flow is too fast or the scalper's slope is too great and/or the screen is too small to allow the accept or good product to fall through.
8. Once the accept product has entered the grader and indent drum the grader will be removing small material from the accept product. If too much accept or good product is being removed from the grader screen, then we will have to change the screen to a smaller size.

9. The grain or accept product from the grader portion of the drum will now enter into the indent section. Once accept product has entered the large pocket indent go to the indent out-feed end of the unit. Here is an inspection door to see what is happening in the indent. « **DANGER - Do not extend anything into the operating area of the Indent inspection doors.** » Using a flashlight the accept product should be lifting into the receiving trough. If accept product is being thrown over the receiving trough reduce the rotation speed of the indent. If accept product is not being lifted enough either increase indent's rotational speed or move receiving trough in the direction of the lifting product. Do not rotate trough past 35 on the dial indicator. At this point you must increase the rotational speed of the indent. The accept product should be dropping in the center of the receiving trough.

When looking in the indent inspection door you will see a green plate. The purpose of the plate is to hold back material in the indent to allow the indent significant time to lift the accept product out of the grain flow on the bottom of the indent into the trough.

Loading hopper and metering gate

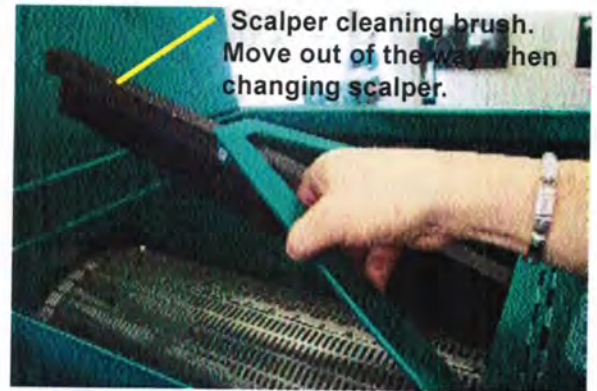


Scalper shell change out

1. Remove the grain receiving chute by pulling the holding pin or clamp fastener.



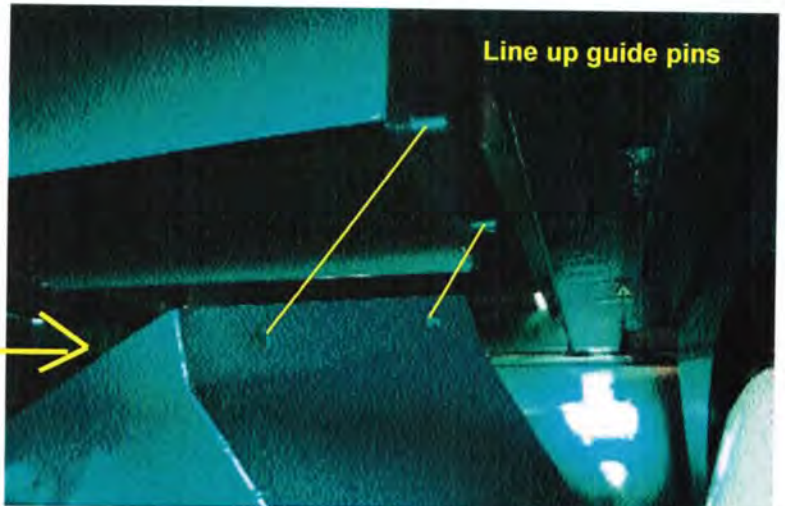
2. On serial numbers SLM-400 1002-1006 you will have to remove a round grain deflector plate on the scalper in-feed hub. From serial numbers SLM-400-1007 up, this deflector plate does not have to be removed. Loosen the shaft collar (5/32 Allen wrench) on the scalper drive shaft at the in-feed end. Remove the collar. Lift the scalper cleaning brush up and out of the way.



3. Pull the scalper in-feed hub and scalper shell out the in-feed end.
4. Once removed out of the unit, remove the three bolts holding the scalper shell to the in-feed hub. Pull the in-feed hub away from the scalper shell.
5. Insert the in-feed hub into the new scalper shell. You will have to line up the three mounting nuts that are on the in-feed hub to the new scalper shell and mark the scalper shell with a felt marker. Have the in-feed end of the scalper shell flush with the outside edge of the in-feed hub. Drill or bore out three holes in the scalper shell where you marked it so the bolts will go through and line up to the nuts on the in-feed hub. Now mount the new scalper onto the in-feed hub.
6. Reassemble the scalper shell onto the drive shaft. The scalper shell must fit inside the out-feed hub or the drive hub of the scalper assembly. New scalper shells are not always truly round, thus you will have to help fit the scalper shell into the out-feed hub. Be sure to line up the key on the shaft with the key way cut on the scalper in-feed hub. Be sure that the scalper shell is tight against the out-feed hubs spokes.

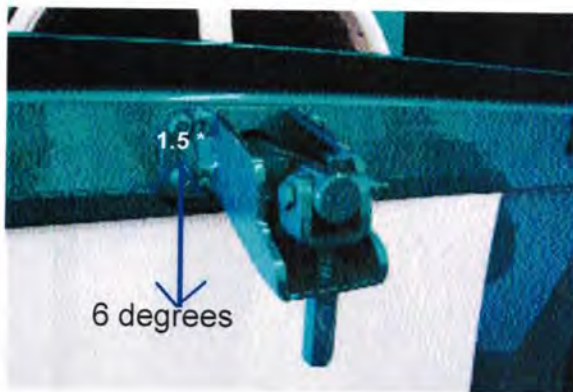
7. Once in place, reinstall the shaft collar tight against the in-feed hub and tighten the set screw. On units SLM-400-1002 through 1006 you will now reinstall the diverter plate to the in-feed hub with the three bolts.

8. Reinstall the grain receiving chute.

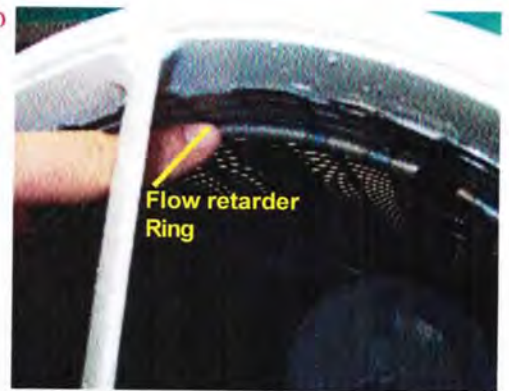


Scalper Adjustments and Features

The M-400X has a unique adjustable pitch design. By using a 9/16" wrench you can adjust the pitch of the scalper between 1.5 degrees and 6 degrees. For most cleaning needs you will run the scalper at a pitch of 1.5 to 2.5 degrees (or it's most lowest position). There is one retarder ring in the scalper placed at 1" before the out-feed end. Set the grain flow so that the accept product (the grain that you desire to drop through the scalper) come up to the retarder ring, but does not flow over. The scalping material is all that we desire to flow over the retarder ring and down into screenings.



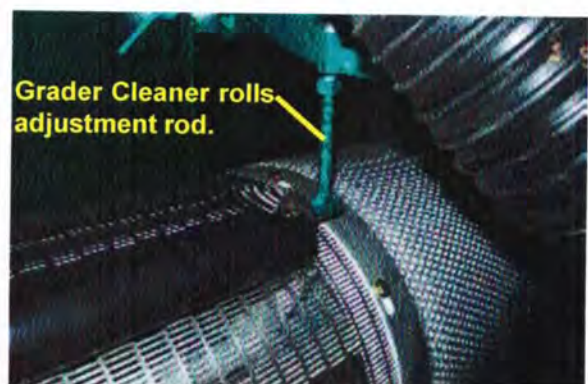
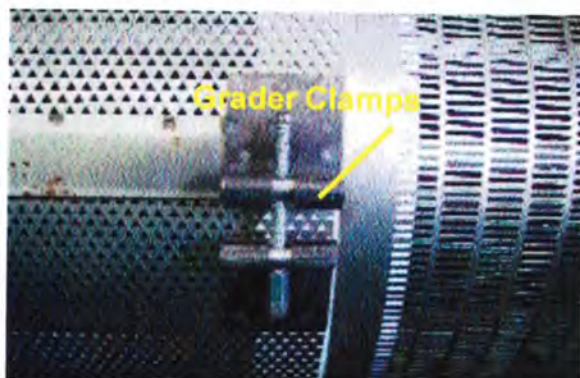
Note - Be careful not to allow the scalper to touch the air chamber in it's most lower position, in reference to the in-feed hub.



Grader screen section

The grader screens are a wrap on style. This allows for quick change overs and lower costs. To remove a grader screen loosen the two clamps, one on each end of the screen. You should not have to remove the bolt completely from the clamp assembly. Push the screen together and flip the bolt out of the clamp assembly. Notice which way the screen was put into the unit, it is important to have the Z flash in the right way for the rotation. Remove the screen and insert the new desired screen. Push the screen edge into the Z flashing and tighten up the two clamps, each a little at a time until tight. Sometimes, due to shipping the Z flashing may be squashed or flattened together so that the screen material will not slide into the Z flashing. If this happens, take a flat screw driver and open up the Z flashing slot so that the screen will fit into the slot.

To adjust the cleaning rollers, turn the 3/8" threaded rod up or down to desired height. You will have to remove the roller's support rod to do this procedure.



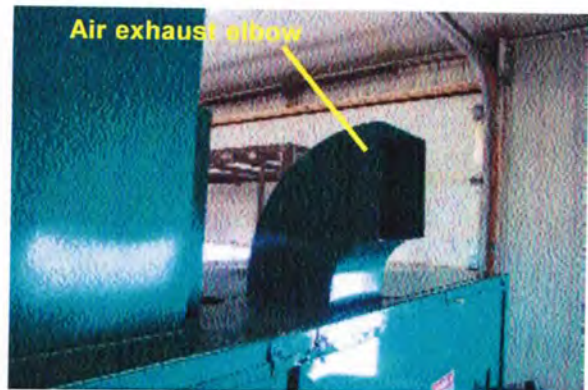
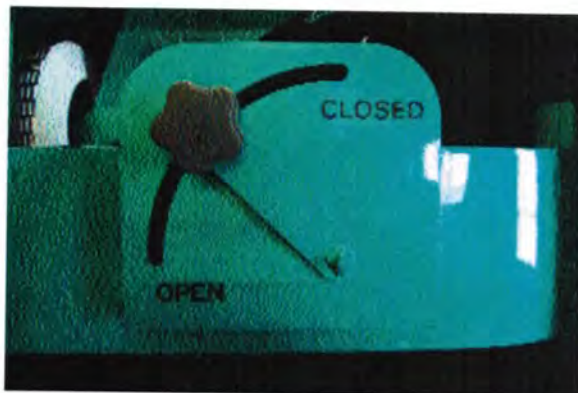
Air system

The air valve for the **internal dust control air** in the unit is located on top of the primary air duct inside the unit beside the fan housing. Have this valve in the most open position (the adjustment lever will be parallel with the pipe).

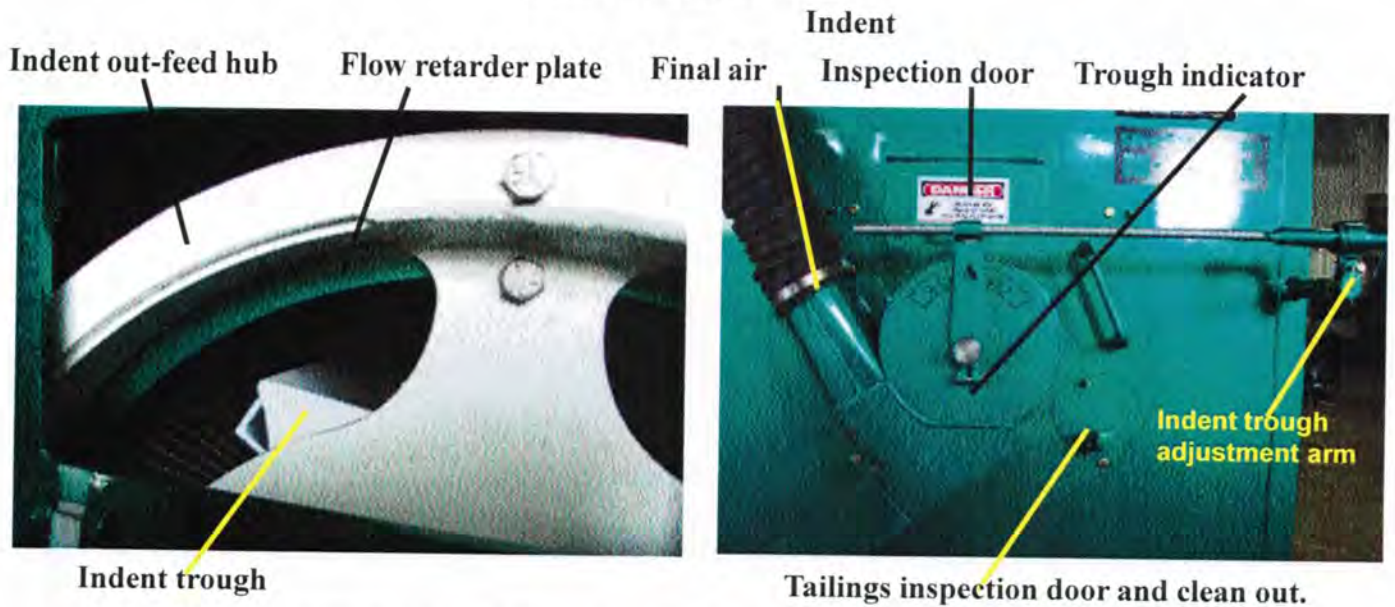


The **final air suction**. The adjustment lever is located on the underside of the primary air duct directly below the receiving hopper air adjustment lever. Set this lever about half way open. This adjustment will be set at a position that you think is right.

The **primary air suction** adjustment lever is located on the left hand side of the unit from the indent out-feed end. The adjustment knob is located around eye level height. There is a cut out on the guard door for this adjustment. Have the primary air in the most off or closed position when starting. Once you have product flowing through the unit you can start opening up the primary air. Open the primary air just until you hear grain beginning to go through the fan. Close the primary air just a bit from this point. This should have the air set for the unit.



Indent and flow retarder



The indent and grader drum should be rotating at a speed of 54 to 58 RPM if you are cleaning cereal grains. The speed adjustment is on the left hand side of the unit from the indent out-feed end. The rotation of the drum from the indent out-feed end should be **clock-wise** (the end with the flow retarder and the indent trough adjustment arm). A simpler way to check that the unit is running in the right direction is to make sure that the fan is blowing air, not suction.

Once accept product has entered the large pocket indent go to the indent out-feed end of the unit. Here is an inspection door to see what is happening in the indent. « **DANGER - Do not extend anything into the operating area of the Indent inspection doors.** » Using a flashlight, the accept product should be lifting into the receiving trough. If accept product is being thrown over the receiving trough, reduce the rotation speed of the indent. If accept product is not being lifted enough, either increase indents rotational speed or move receiving trough in the direction of the lifting product. Do not rotate trough past 35 on the dial indicator. At this point you must increase the rotational speed of the indent. The accept product should be dropping in the center of the receiving trough. Remember to set your flow retarder plates once you achieve the units cleaning volume of product. The flow retarder is located on the indent out-feed hub, just inside the inspection door for the indent.

Note - You have to have the unit turned off to adjust the flow retarder plates. Make sure the power supply is disconnected for this operation.

When looking in the indent inspection door you will see a green plate. The purpose of the plate is to hold back material in the indent(tailings) to allow the indent significant time to lift the accept product out of the grain flow on the bottom of the indent into the trough. Once you have the unit running with product flowing through it check the product (tailings or longs), that the indent is removing from the accept product. If there is too much accept grain in the screenings from the indent, you may want to slow the product flow down for the indent and/or the indent pocket size is too small for the accept product and/or the rotation speed of the indent is too slow. Check the sizing chart.

More often the problem will be wild oats or other larger material being lifted into the trough with the accept product. Other reasons could be that the indent pocket size is too large for the product that you are cleaning or

the indent is removing from the accept product (the tailings). If there is too much accept grain in the screenings (tailings) from the indent the following could be the problem;

1. The product flow is too fast for the indent .
2. The indent pocket size is too small to lift the accept product. Check the sizing chart.
3. The indent rotation speed is too slow.

More often the problem will be wild oats and other larger material being lifted into the trough with the accept product. The reason could be one of the following;

1. The indent pocket size is to big for the product that you are cleaning
2. The indent trough is set to far down into the product lift area.
3. The indent speed is to fast.

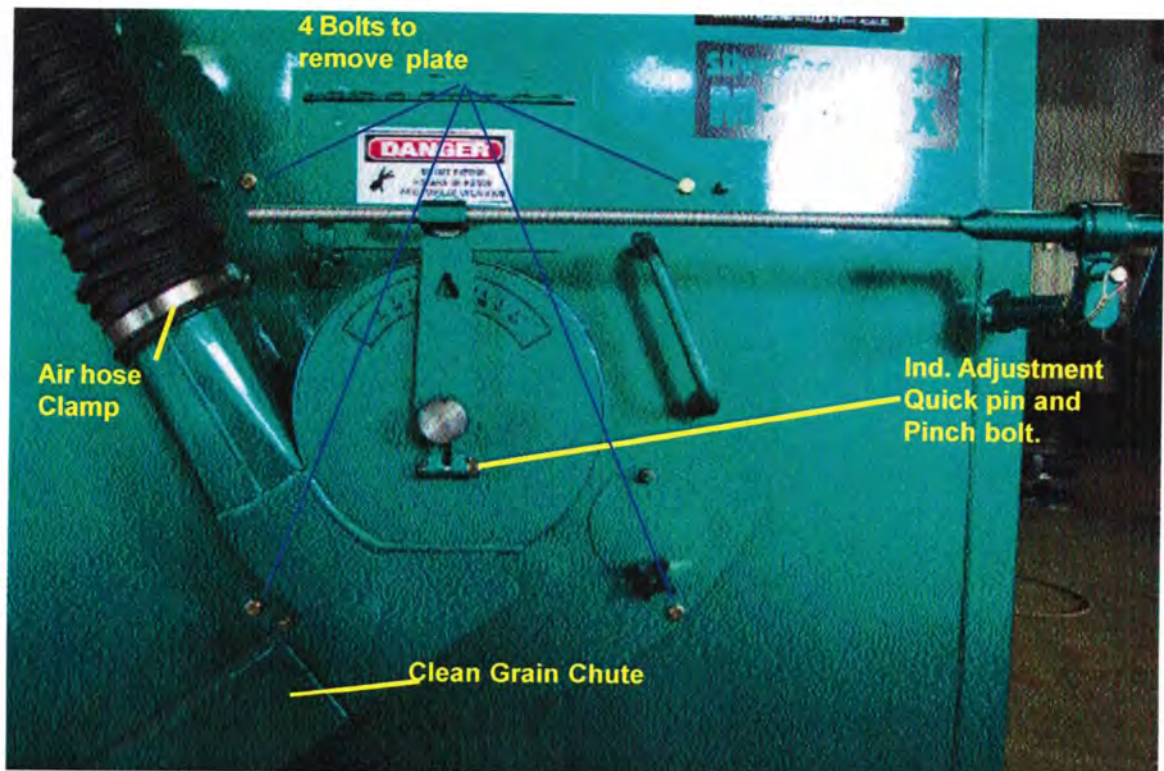


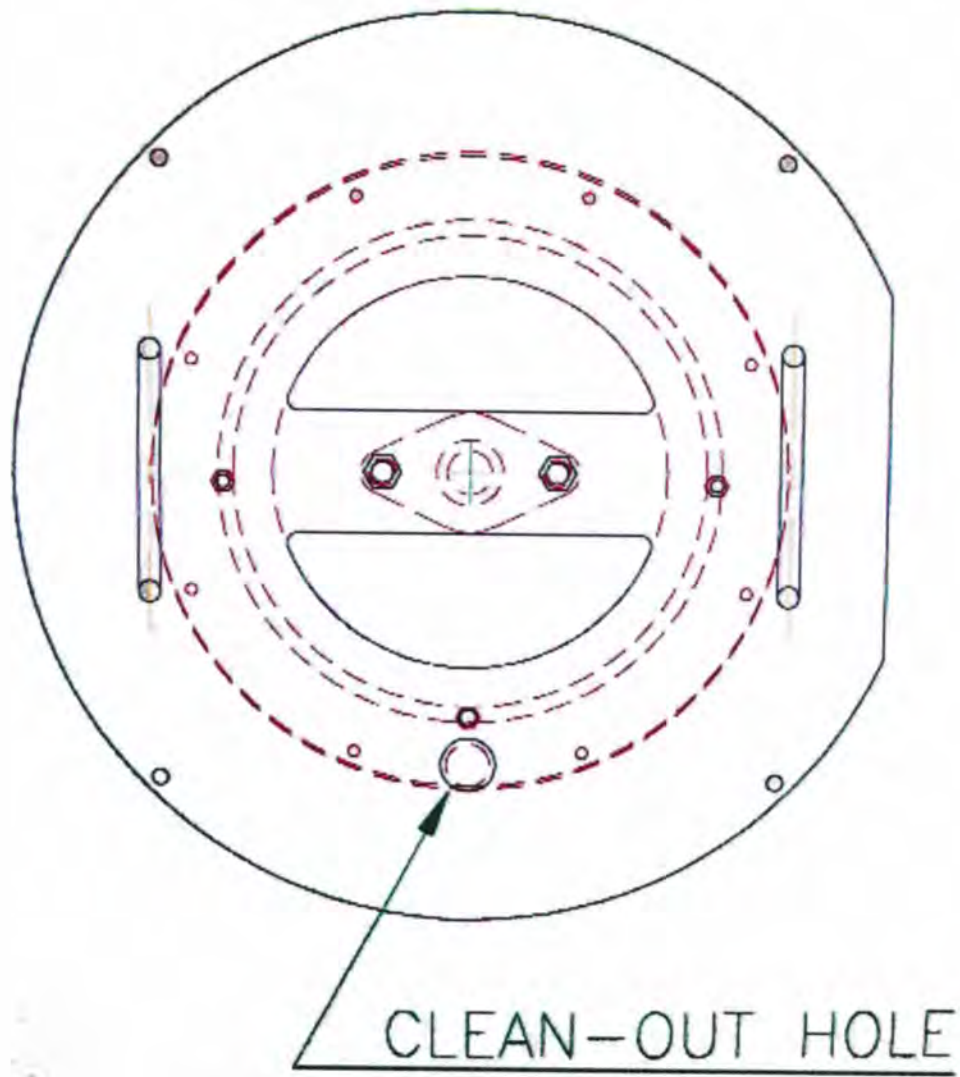
The above picture will describe the final grain and separation flows. The longer spout going to the left hand side of the unit from the indent is the clean grain or accept grain chute (other than oats and pea like grains).

The center chute is where the tailings (wild oats, etc.) from the indent, discharge. It is also the chute where the clean oats and pea like grains will discharge. Oats and peas usually are not lifted into the indent collection accept trough. An indent can be purchased to perform this procedure, if required. The auger head (lower right) is where all the screenings that are collected in the screenings chamber will discharge.

Changing the indent

1. Remove the final air hose by loosening the hose clamp.
2. On the indent trough adjustment arm, remove the quick pin from the working position. Remove the adjustment arm from the indent center shaft by loosening the pinch bolts on the bottom of the dial indicator arm.
3. Remove the clean grain chute by unbolting it from the indent end plate.
4. Remove the four bolts from the indent plate and pull the plate straight out.
5. Loosen the indent drum drive belt. Loosen and remove the grader screens.
6. At the in-feed end of the drum assembly, remove the grain in-feed chute with the three wing nuts. On the drum support bearing, loosen and remove the two large bolts. Support the drum assembly by placing a support in the screenings collection chamber; IE; blocking.
7. Gently lift and pull drum assembly out the indent end. You will only have to pull the drum assembly out enough to have the indent portion clearing the unit. We find it simpler to remove the entire drum assembly.
8. Remove the three bolts that attach the indent to the out-feed hub. Loosen the two set screws on the main bearing on the out-feed hub. Pull and remove the out-feed hub from the drum assembly.
9. Remove the eight bolts attaching the indent to the center hub. Do not adjust or move center hub or indent auger trough on the shaft.
10. Place on the new desired indent and reverse the above steps to reinstall. Be sure that the weld joint for the indent and the center hub match closely. This will line up the bolt patterns of the indent to the center hub.





The above diagram shows a clean-out hole that is located on the Indent in-feed plate. Remove this plug for cleaning out the Indent seal plate when changing crop kinds or varieties. With the unit running, place a vacuum nozzle up against the clean out hole to remove any grain (s) that may be in the seal plate. Once cleaned out replace plug back into the clean out hole.

GJESDAL CLEANER SHELL RECOMMENDATIONS FOR VARIOUS CROPS

Crop	Scalper Shell	Grader Screen	Grader Screen	Indent Shell
Wheat- Red Spring		5-3/4 /64 x 3/4" slot	7V	No. 20
Durum Wheat	10/64" x 3/4" slot			
	10/64" x 3/4" slot	6/64" x 3/4" slot	7V	No. 20
Barley	11-64" x 3/4" slot			
	10/64" x 3/4" slot	6/64" x 3/4" slot	7V	No. 20
	11-64" x 3/4" slot			No. 22
Oats		5-1/2" x 3/4" slot	6V or 7V	No. 20
	10-64" x 3/4" slot	5/64" x 3/4" slot		No. 22
Rye		5/64" x 3/4" slot	6V	No. 20
Flax	10/64" x 3/4" slot □			
	5/64" X 3/4" Slot	5-1/2" Round hole	SAME	No. 16
□ Canola - Argentine		3-1/2" slot	SAME	No. 10
	6/64" Round hole			No. 16
	7/64" Round hole			
-Polish		3/64" Slot	SAME	No. 10
□ Lentils**	5-1/2" Round hole			
	11/64" x 3/4" slot	13 Round	SAME	No. 20
	20 Round No. 22	5-1/2" slot		No. 22
□ Peas		10-13/64 x 3/4" slot	SAME	N/A
□ Canary seed	20-24/64 Round			
	9/64 Round	4-41/2" Round	SAME	No. 16
□ Alfalfa & Sweet clover	3/64 x 5/16" slot	1/20" Round	SAME	No. 6.5
Mustard				
□ Sainfoin	Similar to Canola			
	16/64 Round	5-1/2 slot	SAME	No. 22
□ Tame Buckwheat		10/64 slot	SAME	No. 20
□ Fababeans	15/64 Round			
		12-14/64" slot	SAME	N/A

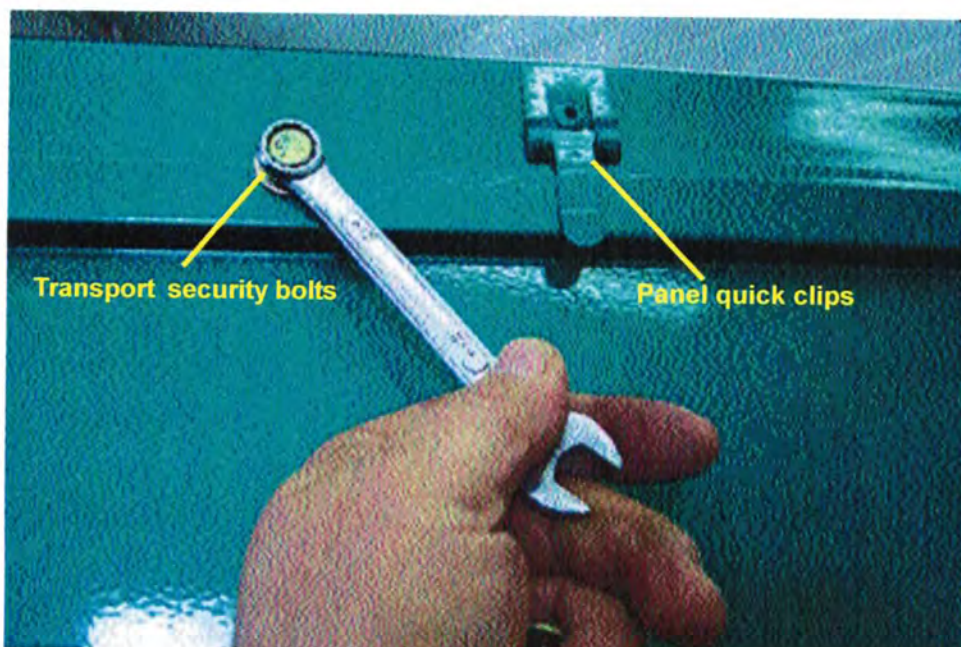
* Specifications subject to change with crop varieties and without notices.

Serial Plate Location

The location of the serial plate is on the indent end of the unit. Please have your serial number available when ordering parts and accessories.

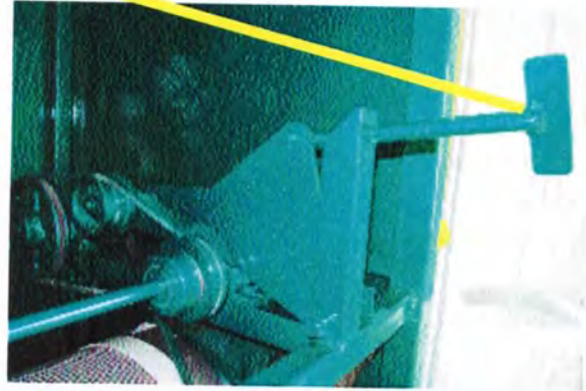
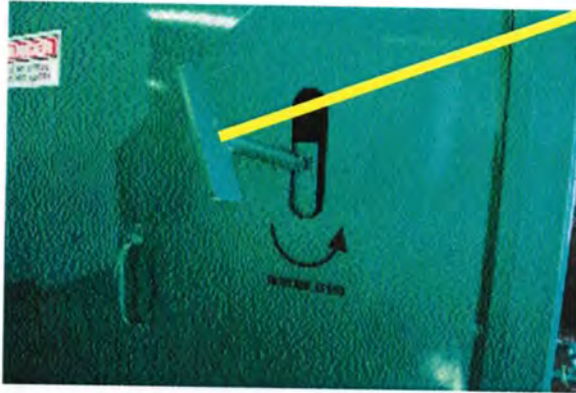


Before operating you should remove the transport bolts that secure the guard panels on to the unit to inspect the inner compartment of the unit. These bolts need to be reinstalled for operating the unit to comply with safety standards even though the quick clips do secure the panels in place.



Important drives to be aware of:

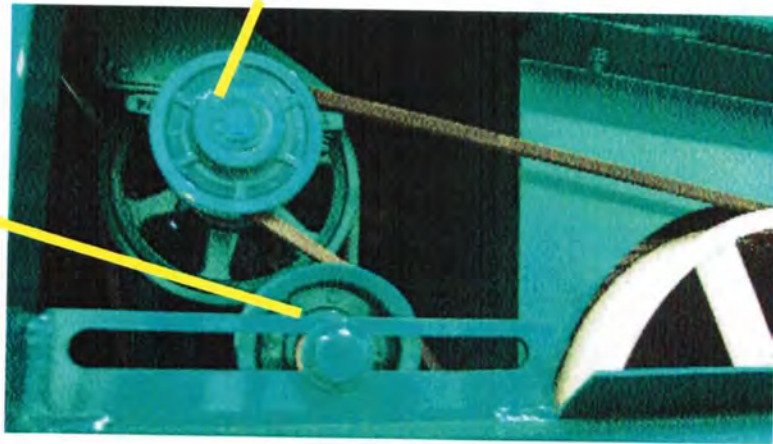
Indent and grader variable speed drive
Adjustment handle



Scalper shell variable speed
adjustable pulley (18 - 30 RPM)

Ensure that the scalper drive belt is tight for even product flow.

(Tightener)



Metering hopper grain shaft
Drive system

Ensure that the Metering shaft drive belt is tight for even product flow.

