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# ***Introduction***

Congratulations on the purchase of your new **Baker DeDuster M4i™**. It should provide you with many years of dust removal operation.

The **Baker DeDuster M4i™** has been designed to be sturdy, simple and easy-to-use. We hope this manual will familiarize you enough with the machine that you will be able to easily make any adjustments necessary.

If you have any questions or comments, please feel free to contact us.

## **Baker Products**

P O Box 128

Ellington, MO 63638

(573) 663-7711

Fax: (573) 663-2787

# ***Spare Parts***

## ***Brushes***

3 .040 bristle

3 .025 bristle

## ***Belts***

8" Diamond Check Belt

8" Rough-top 271/8" long (Pull wheel)

8" Rough-top 123/4" long (Idler wheel)

## ***Chain***

#60 chain 7'1" long

#60 master link

## ***Sprockets***

2 60:12 x 11/4" Taper Lock

1 60:24 x 11/4" Taper Lock

3 60:13 x 5/8" Idler Sprockets

## ***Spring***

120-2918 DeDuster M4i™ Spring (Idler wheel)

# Trouble Shooting

**Note:** Always turn off DeDuster M4i™, lock out, and tag out before attempting repairs.

## **Not cleaning the boards.**

Check dust pipe for clog. Unclog.

Check brushes for wear. Adjust accordingly.

You may need to switch to a stiffer brush, such as the Yellow Strip Brush, if you are currently using the Nylon (Black) Brush. In the most severe conditions, you may need to switch to the Steel Strip Brush to remove frozen sawdust.

## **Board breaks or becomes jammed**

Immediately stop the DeDuster M4i™. Remove the side panel door from the dust chamber. Dislodge any wood. When the dust chamber is free of all wood fragments, replace the side panel door.

The dust chamber should be checked daily for any wood fragments. These fragments can shorten your brush life.

## **DeDuster M4i™ doesn't start.**

Consult an electrician.

## **DeDuster M4i™ doesn't feed properly.**

Check conveyor belt for wear. Re-adjust hopper.

Make sure all adjustments for board size are set properly.

## **DeDuster M4i™ won't keep up.**

Speed it up.

# Warranty

Ellington Industrial Supply, Inc. machinery is warranted against defects in material or workmanship for a period of not more than one year, starting from the date of shipment. The warranty period of one (1) year covers all items manufactured by and at our manufacturing facilities including structural frame, cowlings, doors, shafting, dust chutes, belt extenders, and conveyor wheels, A warranty of six (6) months will cover miscellaneous vendor-purchased-supplied items including bearings, chain, sprockets, hydraulic components, etc. A warranty period of ninety (90) days, beginning on the shipment date is provided on all electrical parts. All electrical components and wiring has been installed in accordance with the National Electrical Code (NEC) of the United States of America. **Ellington Industrial Supply, Inc. does not warranty this machine to meet any other requirements or jurisdiction of any electrical code of any other state, municipality, or other country.** No warranty is provided on any electrical components or parts if equipment is powered or connected to a roto-phase electrical converter in order to create a three phase power supply for operational current from a single phase source.

Parts claimed defective must be returned freight prepaid, to our plant in Ellington, Missouri. Any part determined defective due to faulty workmanship or materials will be replaced or repaired (at our option) free of charge, F.O.B. our plant. This warranty does not cover expendable items (i.e. drive belts, band wheels, conveyor belting, blades, guides, etc.). Except as expressly provided herein, this warranty is in lieu of all other warranties, expressed or implied, including a warranty of merchantability or fitness for a particular purpose. This warranty is "void" if the unit has been tampered with, modified, altered, or operated with parts other than supplied or recommended by Ellington Industrial Supply, Inc. In no event shall Ellington Industrial Supply, Inc. be liable for special, indirect, incidental or consequential damages, however arising, including but not limited to, the loss of earnings or the cost of downtime.

Ellington Industrial Supply, Inc. does not warranty this machine to meet requirements of any safety codes of any state, municipality or other jurisdiction, and the purchaser assumes all risk and liability whatsoever resulting from the use thereof whether used singularly or in conjunction with other machinery or apparatus, including, but not limited to, all matters resulting from sawdust generation.

Any change in materials, design, or performance intended to improve any product of Ellington Industrial Supply, Inc. shall not obligate Ellington Industrial Supply, Inc. to modify any previously manufactured equipment.

This warranty is given solely to the "original purchaser" of the equipment and is in no way to be expressed or implied that it is transferable to any other parties without the written consent and approval from the CEO or Sales Manager of Baker Products.

## ***Service Policy***

In the event that you have any problems, call us at (573) 663-7711 any time between 7:30 AM and 5:00 PM (CST), Monday through Friday. A member of our trained staff will answer any questions you may have. We charge nothing for this service.

A member of our service department will visit your plant at your request. There is a charge for this service. We charge only to cover our costs and do everything possible to keep these costs down. Call for current prices.

The only other charge is for replacement parts not covered by warranty.

## ***Lubrication***

Grease all of the high-speed high-temperature bearings once a month. We recommend Mystik JT-6 or equivalent.

## ***Stand Alone Operation***

The DeDuster M4i™ can be manually fed instead of conveyor fed. The conveyor belt height and the feed speed should be set so that they are comfortable to the operator.

## ***Important: Read this before operating your DeDuster M4i™***

Turn power off, lock out and tag out before changing brushes or servicing machine.

Never operate machine without guards and doors in place.

Always wear eye and ear protection when operating machine.

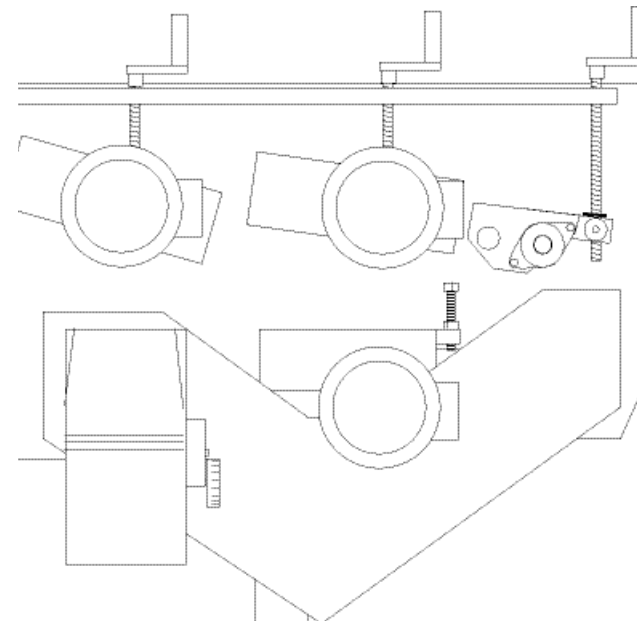
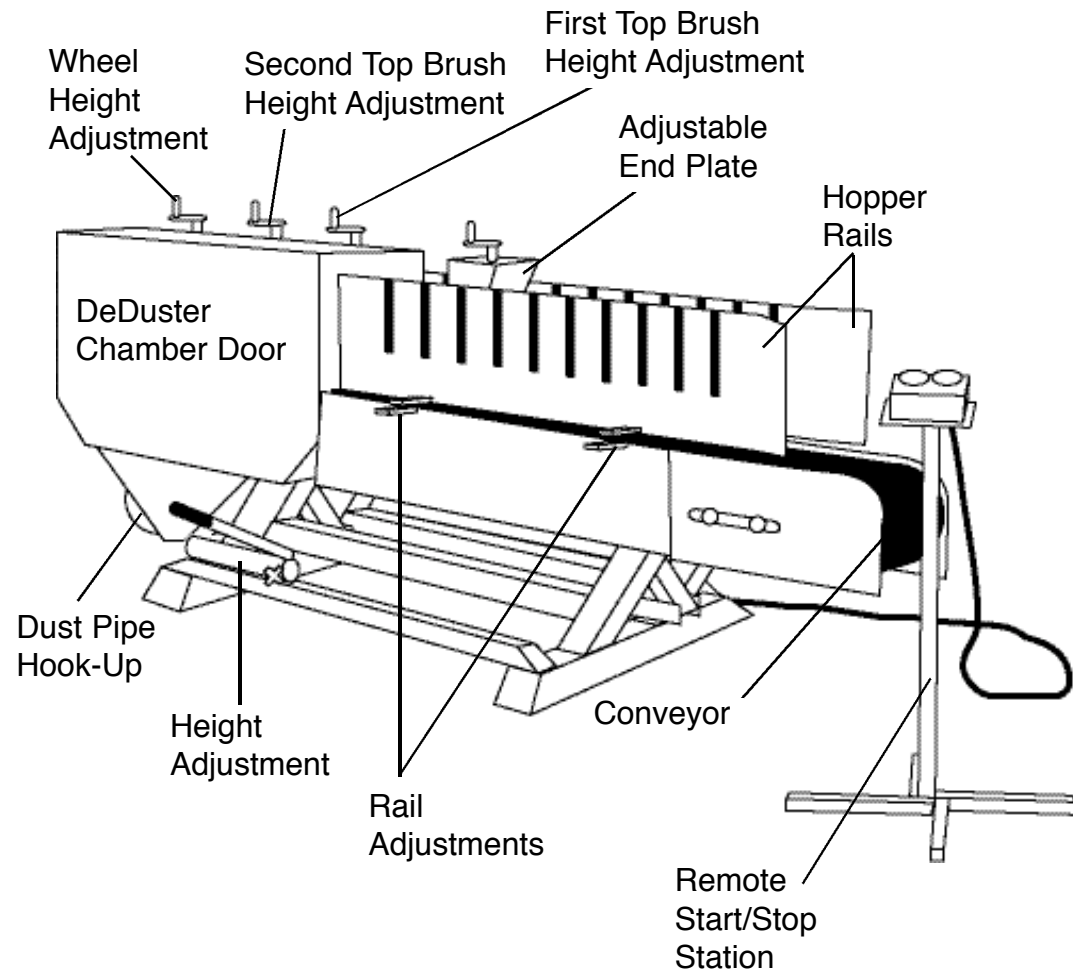
Never wear loose clothing when operating machine.

Keep hands away from all moving parts.

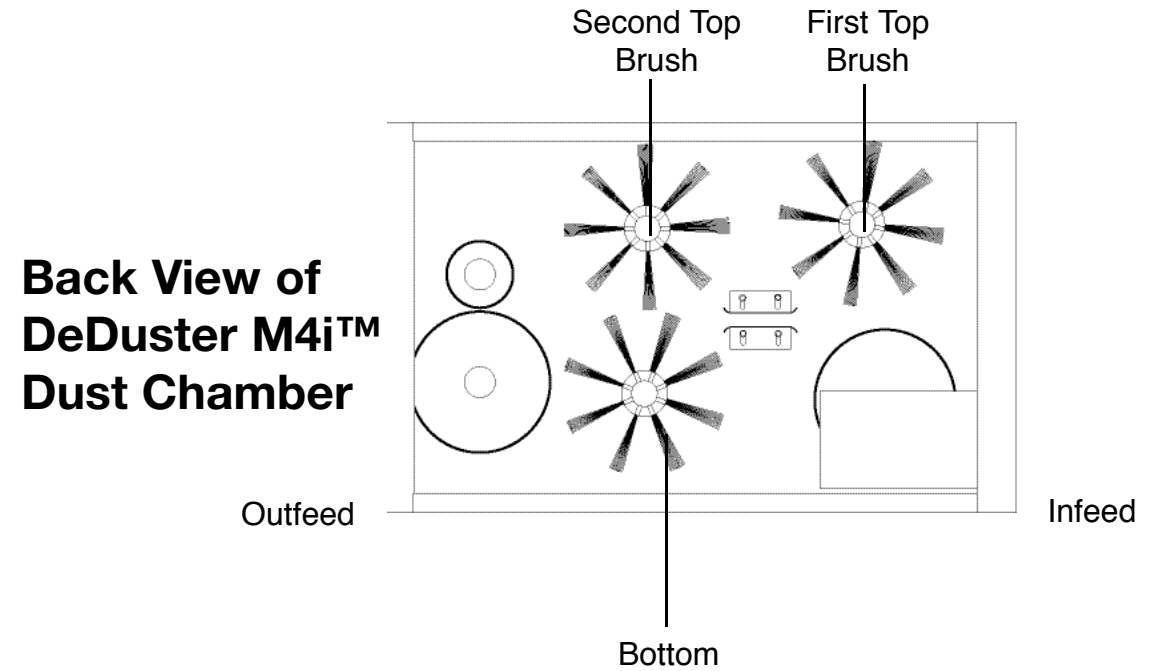
Always provide proper CFM for dust removal.

Some screws may have become loosened during transport. Check and tighten all set screws on the machine before operating, again after the first week, and then monthly.

# Overall View



**Back View of DeDuster M4i™ Dust Chamber**



**Back View of DeDuster M4i™ Dust Chamber**

## Adjusting Brushes

### Top Brushes

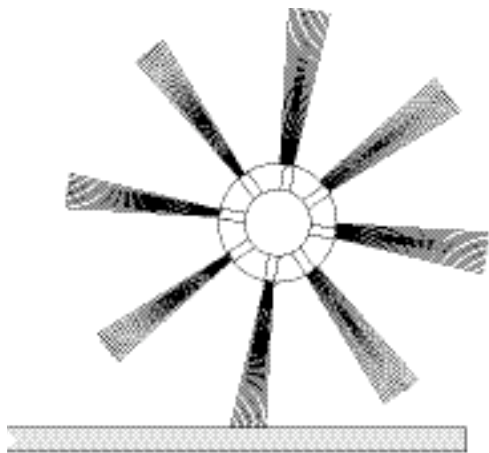
On the top of the DeDuster M4i™ you will find 3 cranks. The crank on the infeed end controls the first top brush. The middle crank controls the second top brush. The last crank controls the hold-down wheel at the end of the DeDuster™. Use the cranks to set the brushes so that they lightly touch the boards. (See diagram.) The brush bristles should not bend. Bending causes rapid wear. Top brushes must be adjusted every time boards of different thicknesses are being cleaned.

### Bottom Brushes

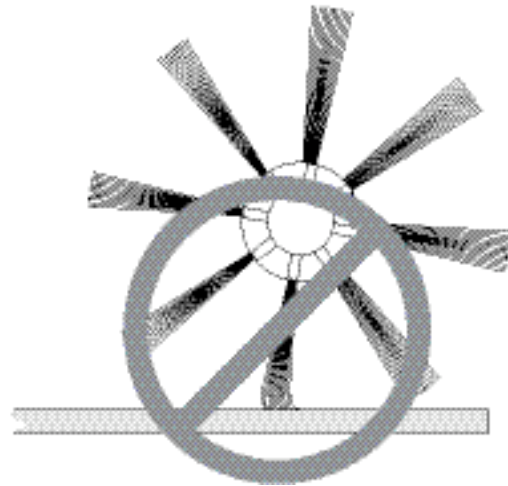
The bottom brush is adjusted with the push bolt located on the back side of the DeDuster™. Set this brush so that it lightly touches the boards. (See diagram.)

### Hold-down wheel

The hold-down wheel at the exit end of the dust chamber should be adjusted with the last crank.



**Correct**



**Incorrect**

## Initial Setup

Hooking up electrical systems should be done by a qualified electrician.

The DeDuster M4i™ is equipped to accept a 6" round dust pipe. For proper dust removal, a minimum of 1,300 CFM is recommended.

Air must be allowed to travel through all external holes to insure proper dust removal from the chamber.

# Setting up the Hopper

## Adjusting for board length

To adjust for board length, move the adjustable end plate to the proper slot. It should be positioned so that the boards do not extend past the conveyor. For best performance, the entire board should be touching the conveyor belt.

## Adjusting for board width

The DeDuster M4i™ Hopper Side Rails can be moved in and out to allow for different board widths by loosening the rail bolts and sliding the rails to the desired position. Rails should be positioned so that boards cannot fall over but not too close to restrict flow. For best performance, position the rails so that the width between them is equal to the width of the widest board plus 1/2 inch.

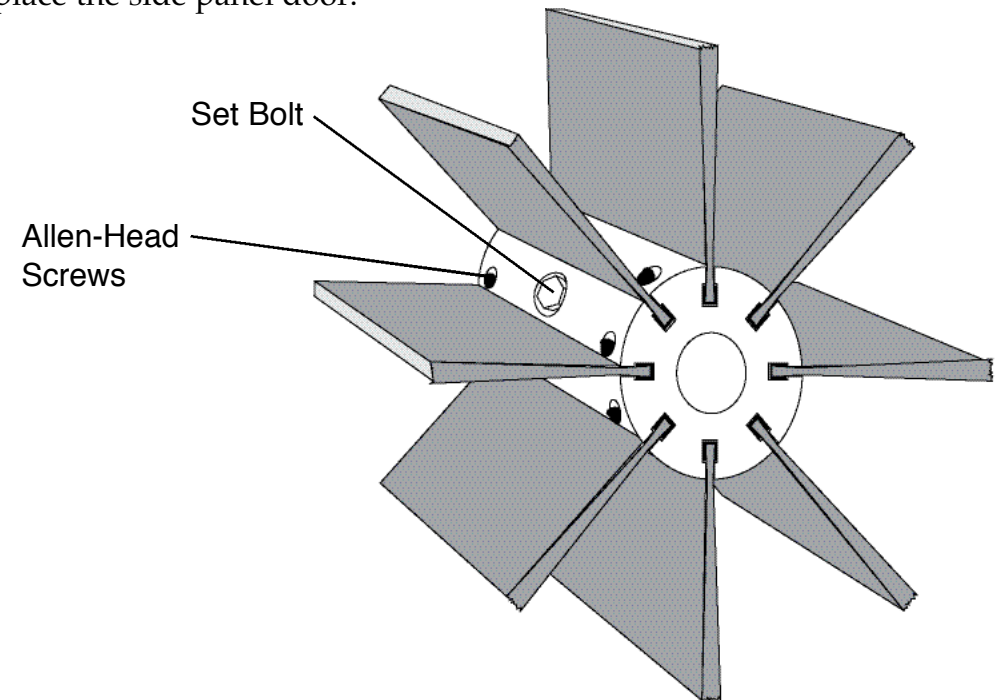
## Adjusting for board thickness

The end plate should be adjusted so that it allows only one board to exit the hopper at a time. Loosen the two bolts on the side of the end plate closest to the Dust Chamber. Use the crank on the top of the end plate to adjust the height of the plate so that only one board can pass beneath it at a time. Retighten the bolts.

7. Insert and tighten the set bolt.
8. Replace the side panel door.

## Changing Strip Brushes

1. Remove the side panel door.
2. Loosen the two allen-head screws on each of the 8 brush strips.
3. Slide the brush strips out and replace in reverse order.
4. Insert and tighten the allen-head screws.
5. Replace the side panel door.





# Brushes

## Types of Brushes

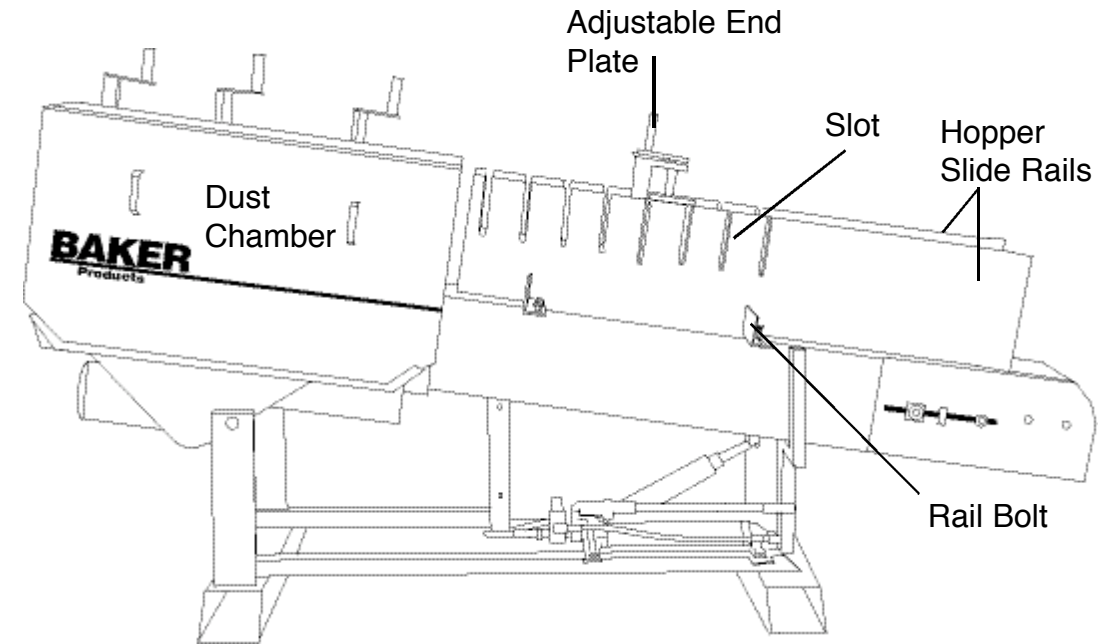
There are three types of brushes:

1. The nylon (black) brush that comes standard with your DeDuster M4i™ is good for most applications in the summer months or year round in warmer climates.
2. For more difficult dust removal in semi-frozen conditions, the strip brush with yellow bristles provides better dust removal.
3. For the most severe conditions, the steel wire strip brushes can be put on the first wheel to remove frozen sawdust.

Some people prefer the Yellow Strip Brushes year around because they are the most most economical of the three.

## Changing Nylon Brushes

1. Remove the side panel door.
2. Use an allen wrench to remove the end cap of the brush assembly. The second top brush and the bottom brush are left-hand threads while the first top brush uses right-hand threads.
3. Remove the set bolt on the brush assembly.
4. Pull the brush assembly straight out and off the shaft.
5. Slide the new brush assembly onto the shaft.
6. Replace the end cap and tighten.



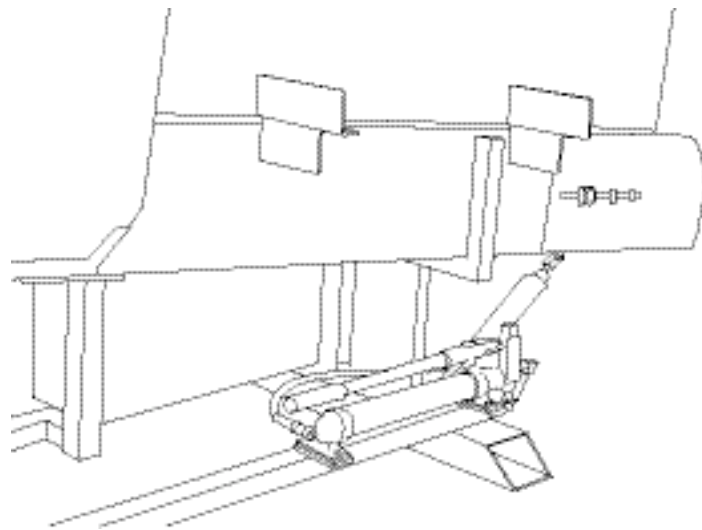
**Front View of DeDuster M4i™**

## Adjusting Conveyor Belt

The conveyor belt's height can be adjusted to accommodate a one- to six-head Baker. Set the height so that the boards can easily stack without a buildup. To determine the best height for your operation, place a sample stack of boards into the hopper and set the conveyor so that the top board is around two inches below the top of resaw conveyor. The incoming stack should be able to stack on top of one full stack.

Remember to change the conveyor belt height when switching from stringers to deck boards or vice versa.

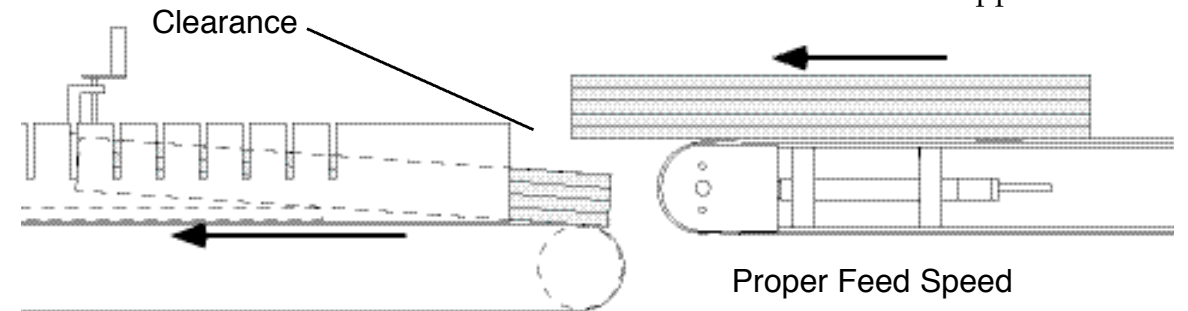
To adjust the conveyor belt height, simply locate the hydraulic jack on the front of the DeDuster M4i™. Pump the handle to raise the belt, or turn the release screw to lower it. (See diagram.)



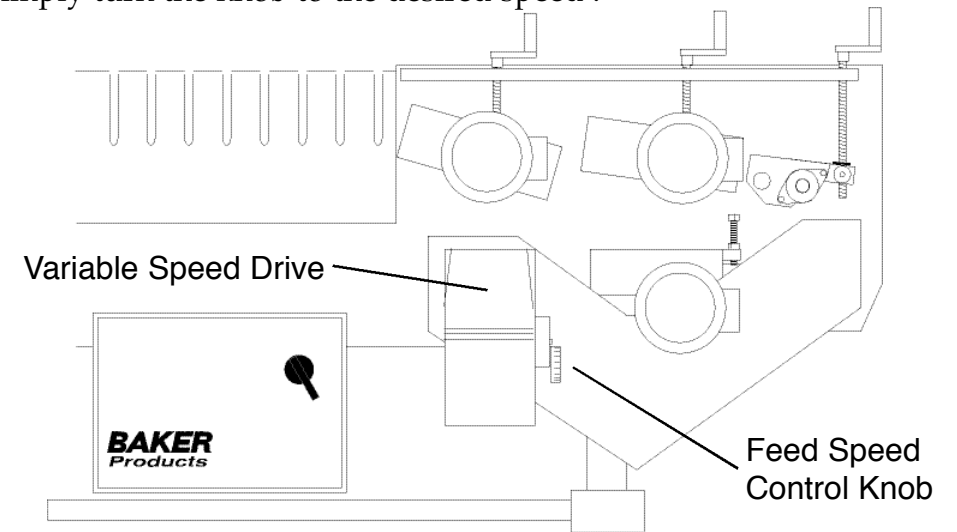
**Hydraulic Jack**

## Setting Feed Speed

The feed speed of the DeDuster M4i™ should be adjusted so that it is as slow as possible but still allows the incoming boards to be thrown from the conveyor by a speed up wheel and to stack neatly on top of the boards left in the hopper. Right before the incoming stack falls, a space of at least two boards is recommended between it and the stack left in the hopper.



The DeDuster M4i™ must be running while you adjust the speed. This protects against slippage of the conveyor belt. First, locate the feed speed control knob on the variable speed drive on the back of the DeDuster M4i™. (See diagram.) Then simply turn the knob to the desired speed.



**Back View of DeDuster M4i™**