**Ideal Distributors**

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# TROUBLESHOOTING

# FOR

# IDEAL - SCHWAB PATERNOSTER

## Models: TPL - 2 HD & TPL - S

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# Introduction

Schwab has designed and manufactured this Paternoster with the operator's safety in mind. Care has been taken to guard operators from moving parts or electrical components, but we cannot protect against careless mistakes or thoughtless actions. Caution and safety should be exercised when operating this or any other machine.

Operators of the Paternoster should be competent staff of the retailer who have received initial training in the operation of the machine by the supplier. Initially trained and competent staff would be responsible for training additional personnel.

In most instances, initial fault finding can be carried out by a suitably qualified tradesperson or mechanically minded handyman. However, if in doubt call Ideal and arrange a service call.

The most common fault is electrical in that the machine stops responding to push buttons. This has been most often caused by power surges, rewiring of power distribution, machine overloading.

Occasionally, a roll will fall off a machine. To date, this has been due to operator error. The mechanical section below details typical recovery action.

# Electrical

**Symptom: Paternoster not Moving/responding to Pushbuttons**

Check the basic electrics, but first check under the machine. Is there anything under the machine that shouldn't be there, eg: pallet, roll, trolley, etc? If there is, it may be that the machine has tripped out on overload. Remove any of these obstructions before proceeding.

Check power plug is properly seated and locked – if not fix and try operating machine. If this fixes it, make sure staff know to fully lock up the plug each time. **If not fixed:**

1. Check that the mains power has not tripped out. There may have been an overload per above, an interruption or blip in power supply and this may have affected the store's main switchboard.
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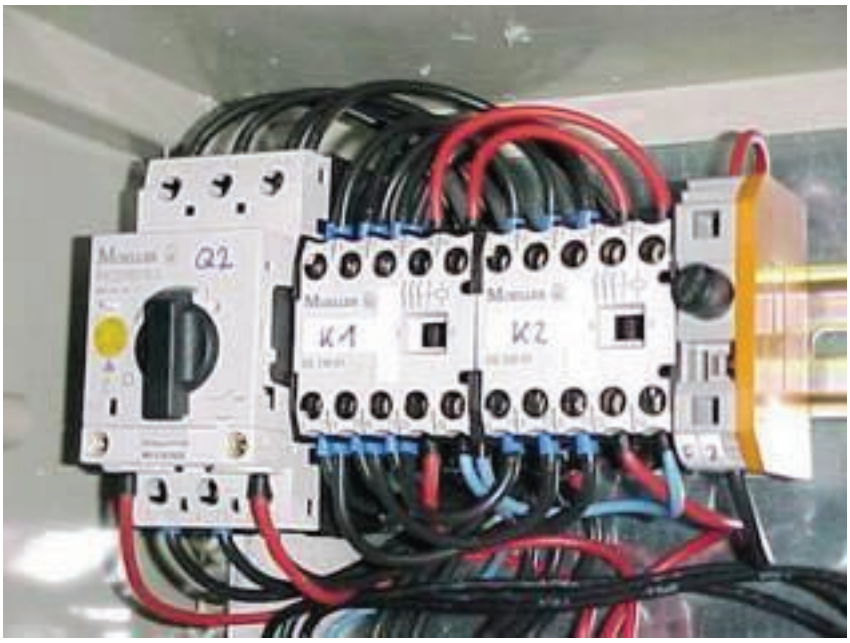
3. Unplug machine from the wall socket so there is no power going to the machine. Look at the paternoster control box, located on the inside of the RHS frame (behind the up/down buttons).

   There are 1 or 2 (depending on the model) overload trip switches on the LHS of the fuse box, marked Q1 & Q2. Check the the black switch(es) are are vertical (as shown in photo above). If not, reset switch (es).

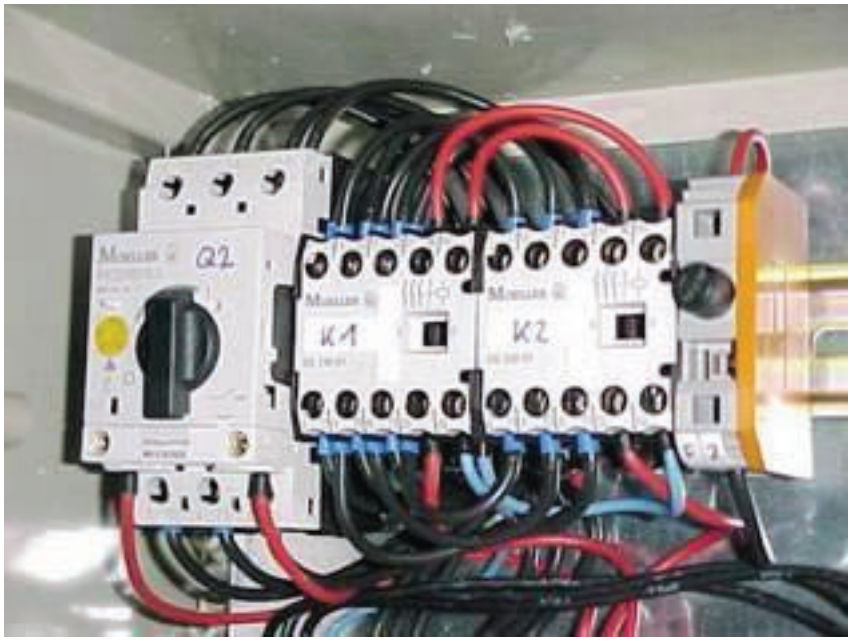



Note: You will need to remove the cover of the control box to do this. If the power plug has been removed from the wall socket, this is perfectly safe to do.

4. Replace cover on the control box and lock it in place at each of the corners. Plug power plug back in, turn on and try machine. If not fixed, then unplug machine as before.
5. Remove fuse box cover again.

   There is a fuse on the RHS – unscrew and check it is OK. If OK, put back in.

   Otherwise, have store electrician replace fuse. If a fuse has blown, the machine has to have drawn extra power for a reason – load unbalanced, trolley or rolls jammed under machine, something jammed in a chain, etc. Check machine carefully to make sure there are no jams anywhere before operating it again.




6. If no fault has been found so far, report to Ideal if machine is still not working.

   Further checks should be done by a qualified electrician only.

   If all is OK so far, check all terminals for loose connections.

   New style K1 & K2 has 3 connecting bars joining the contactors – make sure these are fully in place.

   Check contactors K1 and K2 for open circuit on the coils (if machine goes up or down by pushing in the black buttons on contactors manually, then likely that the coils has burnt out)

   If contactors are open circuit, we will organise replacements

# Mechanical

**Broken or Twisted Carrier Pin Hangers**

This is generally due to incorrect method of unloading a carrier pipe / product roll.

Replace hanger if:

1. Welding is cracked
2. Cheeks are twisted so that cotter pin is more than 1mm inside the cheek plate
3. Spigot retainer pin is missing

**Roll fallen off machine**

This is generally due to either of 3 main causes:

1. A carrier pin hanger has failed - most often due to it having been twisted by incorrect roll unloading - see here for correct procedure.
2. A carrier pin spigot locking pin was not correctly seated after refitting carrier pipe again see here for correct procedure. This fault will particularly cause a problem

if the rolls have been placed too close together. They will bump against each other as the rolls change direction at top or bottom and a spigot may be pushed out of the carrier pin hanger

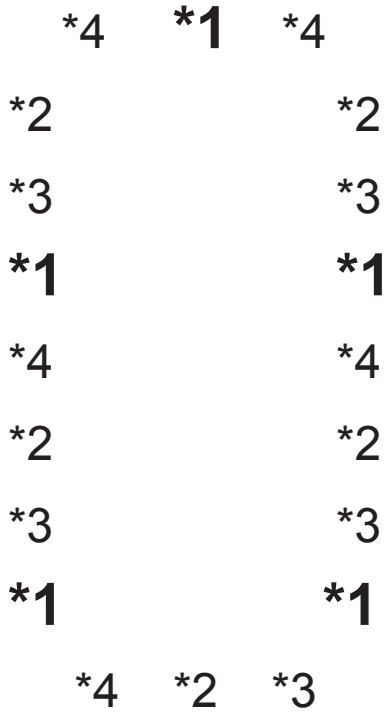
# Even Loading - Weight Distribution

**It is important to have the weight of rolls evenly distributed around the load chains.**

To ensure this may require the daily movement of rolls so as to reposition them. A tell tale sign of uneven loading is the motor noise being audibly louder / a deeper pitch as it lifts a section of stock and then goes quiet when that section is going down.

When loading the rolls initially follow this sequence:

1. Load a roll into every 4th carrier position.
2. Go forward 2 positions and load into every 4th carrier position.
3. Go forward 1 position and load into every 4th carrier position.
4. Spread the load of the balance of stock.




## Note:

When unloading the machine it is important to follow a similar sequence so as to keep the weight evenly spread around the chain.

Do not allow the machine to be more than 15 - 20 % out of balance otherwise the overload switch may be activated.

The roll carrier bars are rated to take the following maximums:

250 kg Roll weight, 65cm roll diameter
Roll width: total of 4 m (eg 2 x 2m) for the 4m machine or 2m for the 2m machine

**To UNLOAD rolls, reverse the LOADING procedures.**

**Do not** load the rolls so you have any of the following occur:

1. All the rolls of the same width in the same section
2. All full rolls in a section
3. All part rolls in a section
4. All rolls of similar weight in same section

**It is important to evenly spread the rolls so the weight is evenly dispersed around the load chain.**

# Paternoster - Roll Spacing:

The machine can be operated with a variety of roll diameters (sheet vinyl or carpet products), but it is important to maintain a sufficient gap between each roll placement so as to ensure the clear rotation of the rolls during operation.

The following minimum gaps between rolls should be followed:

| | | | |
|---|---|---|---|
| Rolls | 20cm - 55cm | diameter require | 10cm gap |
| Rolls | 60cm | diameter require | 15cm gap |
| Rolls | 65cm | diameter require | 20cm gap |

In putting wide width carpet flooring rolls on the paternoster, it is necessary to increase the spacing between the rolls. Normally a carpet roll uses 1.5 vinyl flooring spaces.

# Vinyl Flooring Rolls:

1.2mm - 1.4mm thick x 40 lm have a diameter of approx. 30 - 35cm when new.

The spacing between the vinyl flooring rolls is normally 3 link holes - so a roll carrier bar is placed every 4th link hole.

3mm - 3.5mm thick x 30 lm have a bigger diameter approx. 35 - 40cm when new.

The spacing between the vinyl flooring rolls is normally 4 link holes - so a roll carrier bar is placed every 5th link hole.

# Carpet Flooring Rolls with vinyl flooring rolls:

Carpet flooring rolls with a material thickness of approx 4 - 5mm have a diameter of approx 40 - 45cm when new.

The spacing between these rolls is normally 5 link holes - so a roll carrier bar is placed every 6th link hole.

Carpet flooring rolls with a material thickness of approx 6 - 9mm have a diameter of approx 50 - 60cm when new.

The spacing between these rolls is normally 6 link holes - so a roll carrier bar is placed every 7th link hole.

## Ideal Distributors



Chain Link Holes are approx 10cm apart