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General Roll Cutter Downtime Procedure

In general, a roll cutter does not have many mandatory steps to shut down. However, this procedure provides some tips and cleaning tricks to prepare the cutter most optimally if the cutter will be out of operation for a long period.

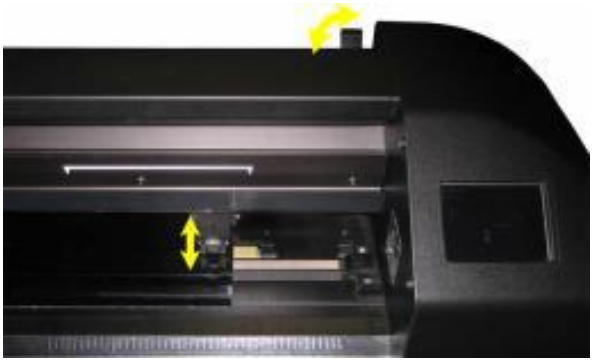
SHUTDOWN PROCEDURE

Shutting down the cutter

Shut down the cutter and disconnect power and data cables from the machine. This can prevent possible damage when, for instance, moving the machine, lightning struck, …

Pinch rollers

The pinch rollers clamp the media to the drive system to ensure accurate tracking. The rollers are made out of hard rubber and tend to deform when pressure is applied and the machine is not in use. Therefore it is mandatory to raise all pinch rollers to ensure good tracking when resuming operations.



Maintenance and Cleaning

When the cutter will be out of operation for a longer period this is the perfect time to do some regular maintenance and cleaning. The S CLASS 2 cutter range has several sliding surfaces made of smooth metals and plastics. They are virtually friction-free and require no lubrication. They will, however, collect dust and lint that may affect the cutter's performance. Keep the cutter as clean as possible by using a dust cover. When necessary,

clean the unit with a soft cloth dampened with isopropyl alcohol or mild detergent. Do not use abrasives.

Cleaning the drive system

Over time, the sleeves of the drive drum may become clogged with accumulated residue from the media liner. This may cause the media to slip between the pinch rollers and the drive sleeves, thus decreasing traction.

There are 2 methods for cleaning the drive system.
First method:

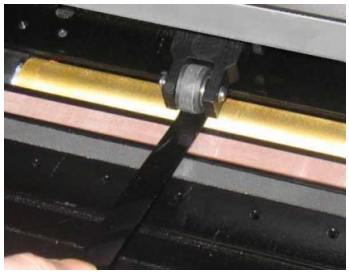
1. Unplug the power cord.
2. Apply a mild solvent (normally used to remove old glue residue) on the yellow sleeves and wait for it to dissolve the accumulated residue.
3. Clean with a brush (a toothbrush is recommended)
4. Repeat the procedure for all dirty drive sleeves.

Dirty drive drum

Clean drive drum

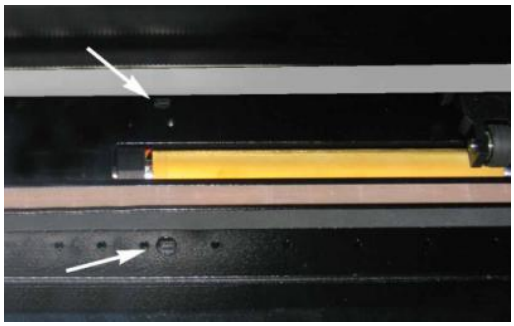
Second method:

1. Make sure there are no media loaded in the cutter.
2. Switch off the cutter and disconnect the cutter from the mains. Raise the pinch rollers.
3. Put a pinch roller above the sleeve that needs to be cleaned. Make sure it is the outer left or the outer right pinch roller (otherwise there is not enough pressure).
4. Remove the backing from a piece of vinyl. Place the piece of vinyl between a pinch roller and a drive sleeve with the tacky side down. Lower the pinch roller.
5. Turn another yellow drive sleeve manually, so that the piece of vinyl is winding on the sleeve for at least one turn.
6. Then pull the piece of vinyl from underneath the pinch roller.
7. Repeat several times until all residue is removed from the drive sleeves.



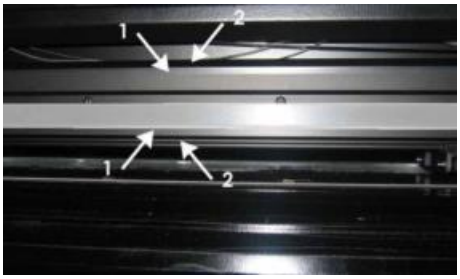
Cleaning the media sensors

Over time, the media sensors may become dirty with accumulated residue from the media. This may cause the cutter to malfunction. Clean the media sensors by wiping them out with cotton swabs.



Cleaning the Y-Guide Rail

There are 4 areas on the Y-guide rail on which the tools carriage slides from left to right. Two areas (1) are visible on the front side of the guide rail. The other 2 surfaces (2) are situated on the back of the guide rail, directly behind the areas that are visible at the front. Figure 5-4 below shows these areas. Although the shape of the Y-guide rail may differ from model to model, the areas are located in the same place at the top and bottom of the guiding.



Over time, there may be some accumulated residue on these sliding surfaces and the rollers of the tool carriage.

Cleaning the sliding surfaces of the Y-Guide rail:

1. Switch off the machine.

2. Take a soft cloth dampened with isopropyl alcohol or mild detergent.
3. Clean the surfaces. When the tool carriage is in the way, push it gently to the left or right.

Cleaning the nose piece (tangential machine only)

The nosepiece may accumulate residue from the vinyl that will result in poor cut quality. The typical indication of a dirty nosepiece is an interruption of the cut line every 12mm (0.5”).

Cleaning the nose piece:

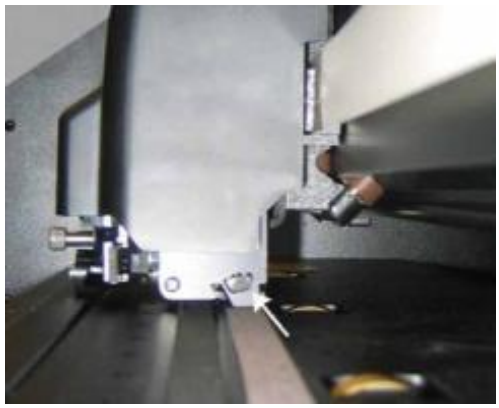
1. Gently remove the knife by turning the knife holder counterclockwise.
2. Observe the orientation of the nosepiece and then push it out of its holder.
3. Remove any remaining vinyl residue using a brush or a pair of tweezers.
4. Replace the nosepiece.
5. Install the knife as described in section 1.7.2.1.

Cleaning the OPOS system

The optical system will collect dust. Therefore, the small hole in the sensor should be cleaned regularly with a cotton-tipped swab.

Cleaning the OPOS system:

1. Pull the knife holder upwards.
2. Locate the sticker over the hole in the OPOS sensor holder at the left side of the tool carriage.
3. Remove the sticker.
4. Clean by wiping it out with cotton swabs.
5. Cover the hole again with a similar sticker.
6. Push the head to the right to ensure that OPOS is raised again.



STARTUP PROCEDURE

Powering on the cutter

WARNING: Make sure the power switch is turned off before connecting the power cord (the “0” side of the ON/OFF rocker switch should be pressed).

1. Plug the female end of the AC power cord into the receptacle, located in the power entry module at the cutter’s rear panel.
2. Plug the male end of the AC power cord into a properly grounded wall socket.
3. Power on the cutter by pressing the “I” side of the ON/OFF rocker switch, which is located on the power entry module at the rear panel.
4. The touch screen will activate and the initialization process will begin. If media is loaded, the cutter will check the size and load the media.

Replacing the knife

When resuming operations with the cutter it is advised to replace the knife for optimal cutting quality.

Tangential knife installation

Removing the tangential knife:

1. Turn the knife holder counterclockwise. The holder will rise, eventually making it possible to lift the knife holder out of the tangential head. The nosepiece is situated underneath. Remove this part if another tool is used in the cutter.

2. The knife can be removed from the knife holder by using something like a flat screwdriver to pry in the groove between the knife and the knife holder.

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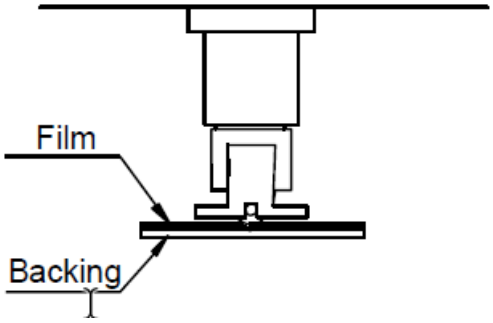
Installing the tangential knife and setting the knife depth

1. Insert the standard knife blade into the knife holder. Make sure the knife blade is firmly fixed in the holder. The knife is inserted correctly if it cannot be removed manually from the knife holder. The installation tool can be used to apply enough pressure on the knife to secure it.

2. Insert the nosepiece from the side until it snaps into place. Gently insert the knife into the tool shaft. Hold the nosepiece in place with one hand and, with the other hand, turn the knife holder counterclockwise until the alignment pin fits into the small notch of the tool shaft. Now turn the knife holder clockwise until its thread fits inside the tool shaft.

3. Hold the nosepiece in place with one hand. Adjust the knife depth with the other hand by turning the knife holder clockwise until the knife tip is just visible from underneath the nosepiece.



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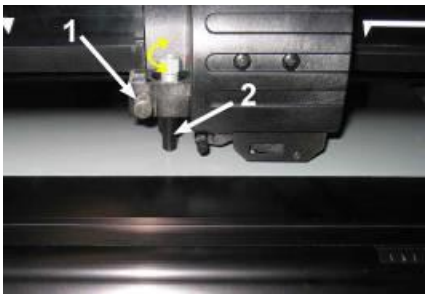
Drag knife installation

1. Loosen the head clamp screw (1), swing the clamp arm back and remove the knife holder from the clamp (2).

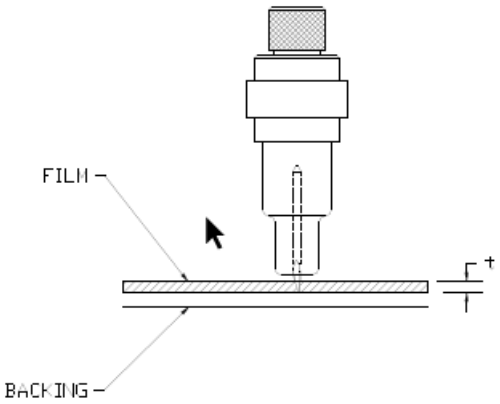


2. Turn the knurled adjustment knob (3) clockwise to push the knife (4) out of the holder (5).

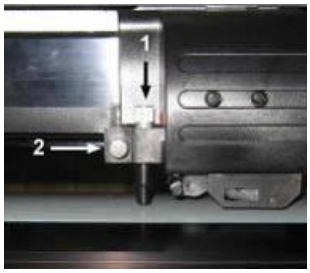
3. Carefully pull the knife from the holder.

Installing the drag knife

1. Remove the aluminium piece from the plastic knife holder (5) by turning the knurled adjustment knob (3) counterclockwise until the aluminium piece comes out of the holder.
2. Insert the conical, non-cutting end of the knife into the opening in the narrow end of the holder. Gently push the knife in.
3. Turn the holder upside down and tap it lightly on a solid surface to ensure the knife is completely inserted.
4. Slowly turn the knurled knob clockwise until the tip of the blade extends the distance required for the desired cutting media (t), as shown in the figure below.



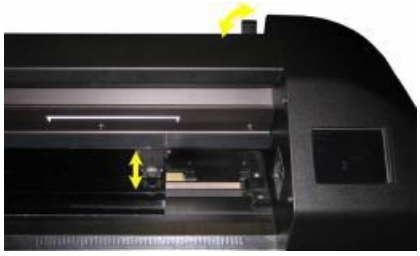
5. Insert the knife holder into the head clamp and push it down (1).



6. Tighten the clamp screw (2).

Loading media

1. Raise the pinch rollers using the pinch-roller-lever arm, which is located on the right-hand side of the cutter, next to the touch panel.



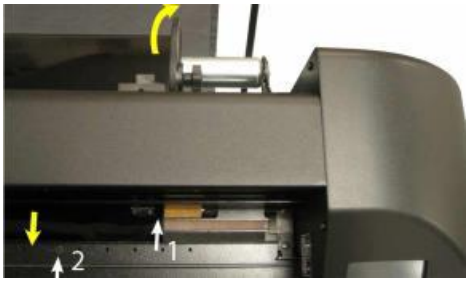
2. Loosen the knobs on the two media flanges. The following illustration shows a loosened flange (1) and a tightened flange (2).

3. Insert a loosened flange into one end of the media roll and tighten the knob. Verify that the flange is secure. Then do the same on the other side of the roll.
4. Place the flange-equipped roll on the media supply rollers. Set the flanges inside the groove of the flange guide. The flange guides can be moved laterally on the roller.

NOTE: If the flanges are not used (not recommended – tracking is not guaranteed), then make sure that the roll is situated between the two flange guides.

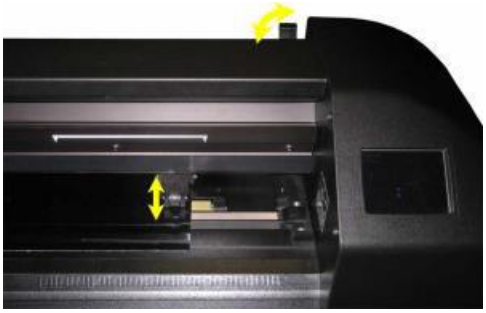
5. Start feeding the media from the rear of the machine. Pass the media underneath the pinch rollers towards the front of the machine.

6. Position the left media edge on the left-most drive sleeve and check whether the right media edge is positioned over the long drive sleeve. Then position the left and right pinch rollers.
7. The pinch rollers should be positioned over the drive sleeves about 3 to 15 mm (0.1” to 0.6”) away from the media’s outer edges (1). Then pull the media while holding the flange at the back so the media is tight. Make sure the front media sensor is covered (2).



In circumstances where the above procedure does not work, because the media is too narrow to reach the long drive sleeve, try positioning the left media edge over the second left drive sleeve and position the right media edge somewhere over the long drive sleeve. Continue moving the left pinch roller toward the long drive sleeve until both pinch rollers click in their designated position and directly over the edges of the vinyl. In all cases, both edges of the media must cover a drive sleeve. If this is not the case, reposition the role of material to cover the drive sleeve.

8. Make sure that the media follows a straight path from the roll of material. To accomplish this, slide the media roll and flange guides from the left to the right along the media support rollers.
9. Lower the pinch roller lever to press the media firmly against the drive sleeves. The tool carriage will move automatically from the right to the left to sense the usable media width.



NOTE: It is not recommended to unroll the media manually from the roll. The cutter will unroll the media automatically during the load sequence.

10. The positioning and routing of sheet material are identical to that of roll media.
11. The cutter is now ready.