Swirl Free Check List:

Equipment Check:

Sander:

- ☐ **Random orbital sanders are designed as finishing sanders.** To achieve the best finish results, use the sander as a "finishing sander". Do not exert heavy downward force on the sander. Apply enough downward force to keep the back-up pad and abrasive flat on the surface while still allowing the back-up pad to orbit freely over the surface. Remember – **let the sander do the work**.

- ☐ **Match the sander to the work.** For heavy and faster cut rate use a sander with a 3/8" diameter orbit. For moderate cut rate use a 3/16" diameter orbit, and for the lightest cut rate, and the finest in finish sanding use a 3/32" diameter orbit. Excellent results can be accomplished by selecting the correct sanding action, the correct grain abrasive, and the correct sequence of abrasive on the selected sander.

  Example: **Heavy/Fast Cut Rate:** 3/8" orbit - < 150X.

  Moderate Cut Rate, Fine Finish: 3/16" orbit - 150X – 220X

  Lighter Cut Rate, Finest Finish: 3/32" orbit - 220X >

- ☐ **Check the orbit diameter that is being use for the application.** In some cases a 3/32" orbit is more preferable than a 3/16" orbit.

- ☐ **90 PSIG (6.2 Bars) is the required operating air supply pressure.** Check the air pressure at the sander while it is running. Note: Promote the use of Dynabrade® maximum flow plugs and couplers to ensure proper airflow.

- ☐ **Confirm that the tool is running at the rated "Free Speed" RPM.** On an average a 10,000 rpm non-vacuum sander will run at 9,500 rpm; a 12,000 rpm non-vacuum sander will run at 11,500 rpm. A vacuum sander normally runs slightly slower.

  Note: Removing the sanding residue from the work surface with a central or self-generated vacuum sander will improve the finish. It will also help to extend the life of the abrasive. Consider using a vacuum style sander.

- ☐ **Inspect the balancer bearing (pad bearing).** Remove the back-up pad and rotate the balancer bearing shaft while holding the counterbalance stationary. The balancer shaft should turn freely.

Back-up Pad:

- ☐ **Inspect the face of the sanding pad.** The pad must be flat and smooth, without any defects. Check if they are using a Dynabrade back-up pad that is **"weight-mated"** to the sander. Using another pad can make the sander vibrate excessively and lead to an unacceptable finish.

Abrasive:

- ☐ **Use a good quality abrasive.** Abrasive product that has an additive to help prevent loading of the sanding disc will provide a superior finish than abrasive that has no additive. When sanding particularly sensitive surfaces such as Corian® and other acrylic solid surface it is best to use a film backed abrasive sanding disc. Film backing forces the abrasive to lie flat on the surface. The grain is then presented to the sanding surface in a very uniform manner.

DYNABRADE, INC.
8989 Sheridan Drive
Clarence, New York 14031-1490
Phone: (716) 631-0100
Fax: 716-631-2073

DYNABRADE INTERNATIONAL
8989 Sheridan Drive
Clarence, New York 14031-1490
Phone: (716) 631-0100
Fax: 716-631-2524

DYNABRADE EUROPE S.ar.l.
Zone Artisanale
L-5485 Wormeldange—Haut, Luxembourg
Telephone: 352 76 84 94 1
Fax: 352 76 84 95 1

Swirl Free Check List (Continued):

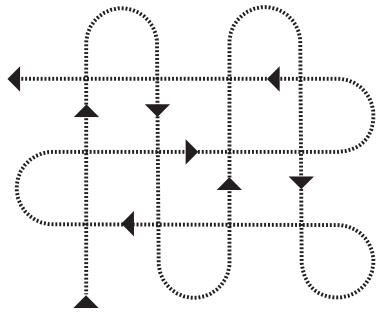
Sanding Techniques:

☐ **Always START the sander ON the surface, and STOP the sander OFF the surface.**

☐ **When sanding keep the sander, and pad FLAT on the surface.**
Important: Do not exert heavy downward force on the sander. Apply enough downward force to keep the back-up pad and abrasive flat on the surface allowing the back-up pad to orbit freely over the surface.

☐ **Follow a set pattern when sanding.** It is suggested to pass over the surface following a "North, South, East, West" pattern (see Fig.1), overlapping each pass ¼ the diameter of the back-up pad and abrasive. This insures that the previous scratches are removed and that a uniform finish is achieved. Two "patterns" per sanding step are recommended.

Fig. 1
Sanding Pattern



☐ **Frequently inspect abrasive for tears, folds, or build-up.** When changing abrasive to proceed to the next sanding step, first inspect the condition of the abrasive that is on the sander. If any defects are noticed in that abrasive, remove it and install another piece of the same grain and sand the work surface again before proceeding on to the next sanding step.

☐ **Always clear away sanding dust and abrasive debris before progressing to the next sanding step with a finer "grit" abrasive.**

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