

KIC TECHNICAL BULLETIN

IDENTIFYING DRUMS WITH ECCENTRIC BALANCE CUT

Summary: Machined to balance drums that use an eccentric lathe cut may not look balanced, but they are. Here's how to identify such drums.

Eccentric balance corrections offer the minimal stress concentration points for improved fatigue life. It is KIC's preferred balancing method, when feasible.

Each KIC drum to be balanced (designated by an "8" in the suffix) is checked with a machine to determine if it needs balancing. In some cases, the drum is within the standard 20 oz. in. and does not need to be machined. These drums will not have any machine marks at all.

If machining is required, the drum is mounted "off center" in a CNC lathe, which then machines off a thin crescent of material from the band around the drum. (Figure 1). This means that some balanced drums don't "look" balanced. You may have to look closely to notice the following details.

Characteristics of an eccentrically balanced drum:

1. Transition between finishing cut marks and balancing cut marks (Figure 2)

When viewed at an angle, you will note that there is a visible change in the depth between the two cut surfaces of the squealer band

2. Transition between squealer band chamfer and balance cut chamfer. (Figure 3)

It is possible to see the change in chamfer where the balance cut transitions into the squealer band finish cut.

Other methods of balancing drums include drilled holes and plunge style CNC mill cuts, but these are apparent when examining the drum.

Drums with an "8" suffix are guaranteed to be balanced within 20 oz. in. regardless if they have been machined to balance, or if they were cast in balance.

Questions? Contact KIC customer service at 800-488-5422

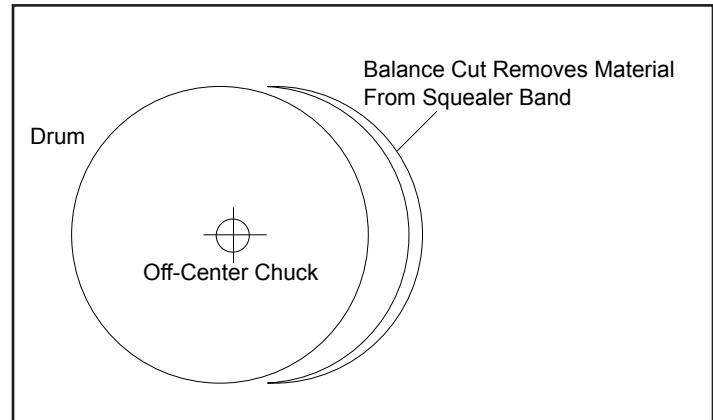


Figure 1. - Off-center machining

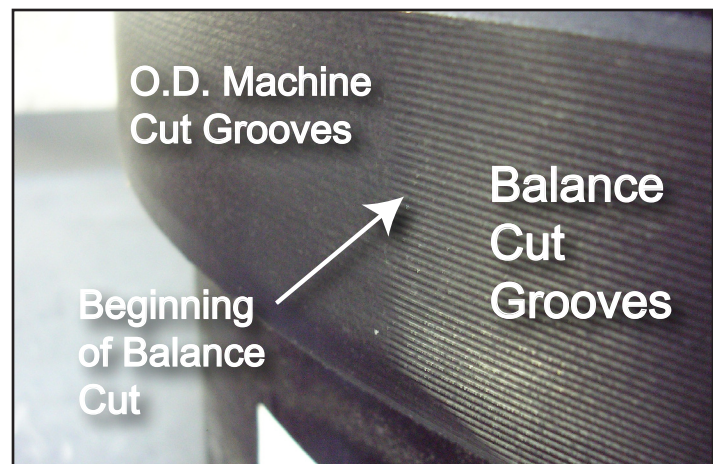


Figure 2. - Visible transition in tool marks

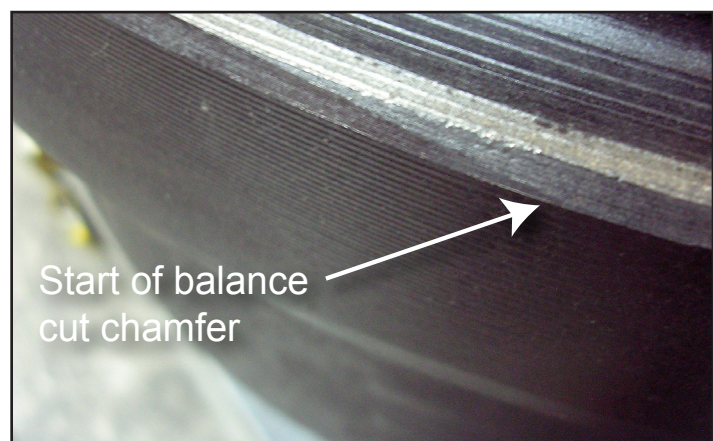


Figure 3. - Transition in chamfer