

Perfect Brake Job. Every time.



TECHNICAL TIPSHEET #1

ASSURING SMOOTH FINISHES WITH YOUR PRO-CUT LATHE

INTRODUCTION

The Pro-Cut on-car brake lathe should provide a smooth surface finish on every cut, free of chatter, tone, or roughness. This bulletin serves as a guide in case your machine should provide a sub-standard finish. If problems exist, often the "chatter" or rough finish will show up only on certain rotors. Regardless, you need to find the problem. The list at right covers the places to look.

WORKSHOP

Tighten the Gib

Poor finish quality can be the result of a loose cutting head. If the cutting head can be moved from side to side at all, it should be tightened using the five allen set screws on the side of the cutting head.

To adjust these, first remove the two allen bolts at the back of the slide plate. Next, loosen the lock nuts and, starting from one end, tighten each set screw until it stops — then back it off slightly and set the lock nut.

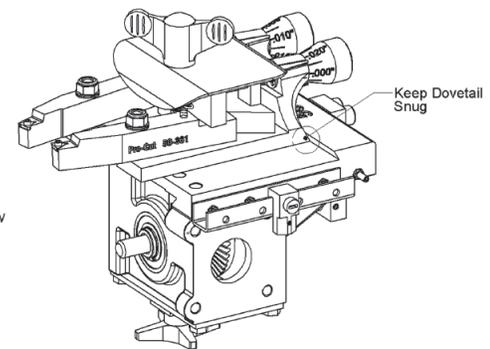
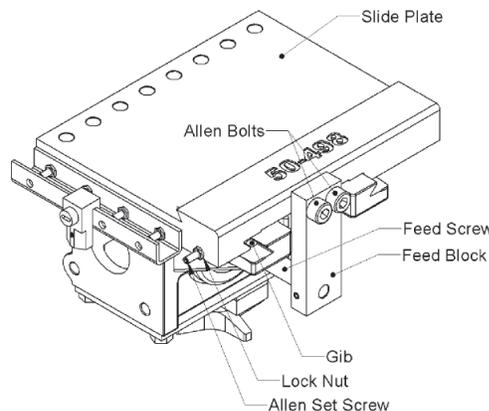
When finished, the head should slide up and down the channel with some resistance and without any side play. Crank the feed screw forward before reconnecting the slide plate. This insures that the slide plate is centered over the feed screw.

1 Cutting tips / depth of cut

The cutting tips must be right-side up. Letters face up. The cutting tips should not have chips or dings in the surface of the points. It is important to not take cuts of less than 4 thousandths of an inch unless absolutely necessary. Cuts of 4 to 20 thousandths will provide the best surface finish and the longest tip life.

2 Cutting head not snug

On each brake job, the technician must center the cutting head for that particular vehicle, using one of the helicoil holes on the slide plate. Once the head is centered, it is **vital** that the technician use the left hand to **push the head firmly and squarely back into the dovetail** on the slide plate while using the right hand to tighten the allen bolt that secures the head. Failure to do this **will** result in chatter.



3 Tool holder plate is bent

The tool holder plate is the plate that the cutting arms are bolted onto. It will bend or break if the technician accidentally runs the cutting arms into the hub of the rotor while the rotor is turning. (Cuts of more than twenty thousandths of an inch can also bend this plate.) **Once it is bent the lathe will not cut properly until it is replaced.**

In order to diagnose the tool holder plate on a machine that will not cut right: Remove the cutting head from the slide plate. With the plate at an angle, lay the long edge of the tool holder plate down on the flat part of the slide plate. If **any** gap can be seen between the edge and the slide plate, the tool holder plate is bent. It is the source of vibration.

4 "Loose Gib"

As wear occurs between the slide plate and the box it rides on, you must take up the slack. You do this by way of a moveable wedge which we call the gib. The workshop at left describes the adjustment process, which you should perform **monthly** and also **whenever surface finish is inconsistent.**