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## GENERAL GRINDING INFORMATION

### For JEFFCO Model CG03 Cutter Grinders

Disclaimer: This information does not constitute engineering instructions for maintenance of the cutting systems in JEFFCO equipment. It is intended only for general advice. Refer precision grinding to a properly qualified practitioner or trades person. The User Manual for the Cutter Grinder must be consulted because it contains all relevant dimensions and instructions.

## Sharpening JEFFCO CG03 Cutting Components

### *Precut Blade – CG030151*

1. Clean all foreign material and rust from blade and inspect for damage or cracks. Do not use blades that are cracked, damaged or not perfectly flat.
2. Clamp the blade in a tilting vice and tilt vice to 15° so that the cutting land of the blade is parallel to the longitudinal travel of the surface grinder.
3. Use a dial gauge to set the blade up to  $\pm 0.1\text{mm}$  of parallel to cross travel.
4. Dress the grinding wheel and surface grind the blade until it has a sharp edge along its full length making a note of the total amount of metal removed. Surface grinding the blade must be done lightly to reduce occurrence of vibrations.
5. Turn blade over and set up as in step 3.
6. Surface grind the second edge of the blade to the same quantity of metal removal as the first edge ie the width of the blade should be identical on both sides of the hub. This is critical to maintain balance of the part at high speed.
7. All 4 cutting edges can be sharpened by this method. Do NOT reduce the blade width to less than 40mm and do NOT grind into the hub of the blade.
8. The blade should be demagnetised before use. See later.



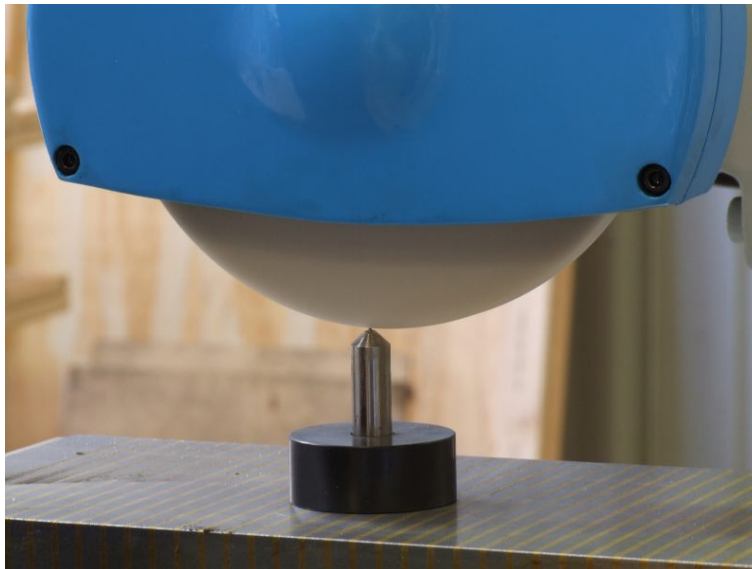
A typical low cost surface grinder and magnetic chuck or table



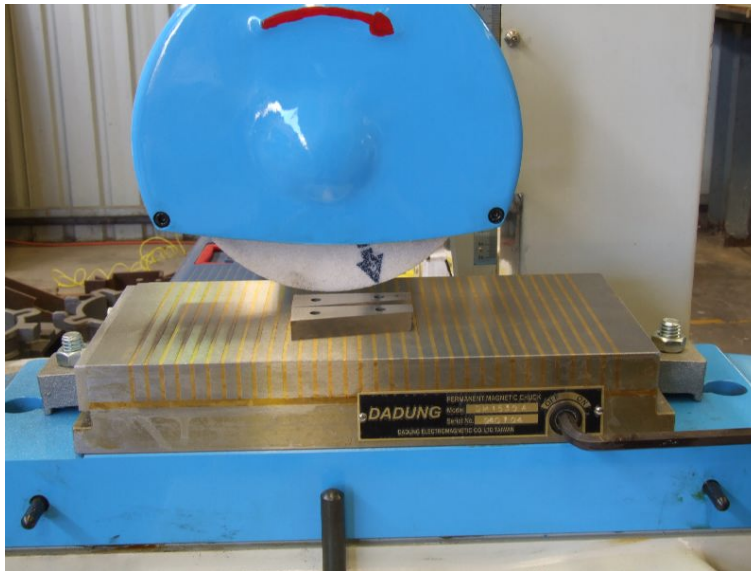
Grinding a Precut Blade in a tilting vice.

### **Main Blade – CG030162**

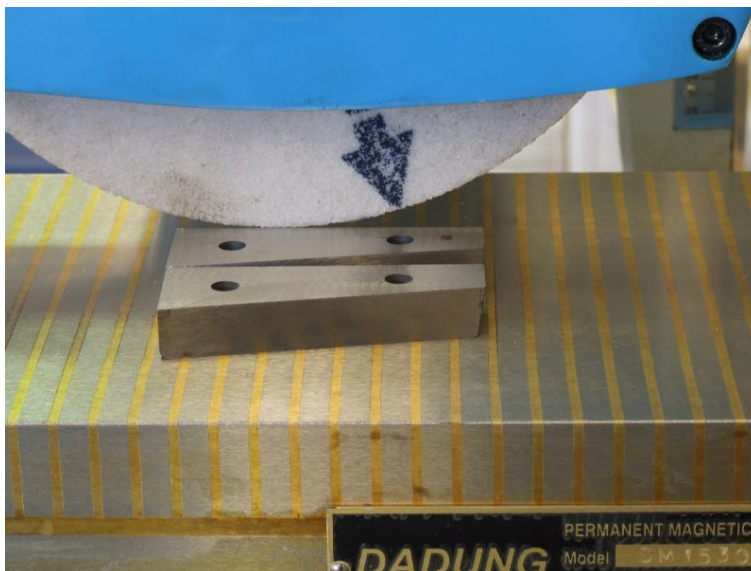
1. Clean all foreign material and rust from blades and inspect for damage or cracks. Do not use blades that are cracked or damaged.
2. Place both blades on the magnetic table of a surface grinder so that the cutting surface of the blade is up. Blades **MUST** be ground in pairs to maintain mass and hence, balance.
3. Dress the wheel and surface grind the blades until they have sharp edges along its full perimeter. Surface grinding the blade can only be done lightly due to the low magnetic adhesion of the high-grade stainless steel that the blades are manufactured from.
4. Do not grind the blade less than 9mm thick.
5. The blades must be demagnetised after grinding. See later.



Dressing the grinding wheel with a diamond-tipped dresser



Typical Grinder with magnetic table to hold the blades



Grinding the Main Blades in matching pairs

### **Stators – CG030241**

1. Clean all foreign material and rust from the stators and inspect for damage or cracks. Do not use any stator that is cracked, damaged, pitted or suspect.
2. Place all 4 stators in line on the magnetic table of a surface grinder so that the cutting surface (the surface that first meets the main blades in the Cutter Grinder assembly) is up and arranged so the tongues of the stators all point across the longitudinal travel.
3. Dress the wheel and surface grind the tongues ONLY of the stators until they have sharp edges. Do not surface grind the full face because the portion of the stator that fits into the pocket of the Cutter Grinder Midbody must remain dimensionally correct. Surface grinding the stators should only be done with small cuts due to the low magnetic adhesion of the high-grade stainless steel that the stators are manufactured from. Refer to the User Manual for full instructions and dimensions.
4. Do not grind the tongue of the stator less than 22mm thick.
5. The stators must be demagnetised after grinding. See later.

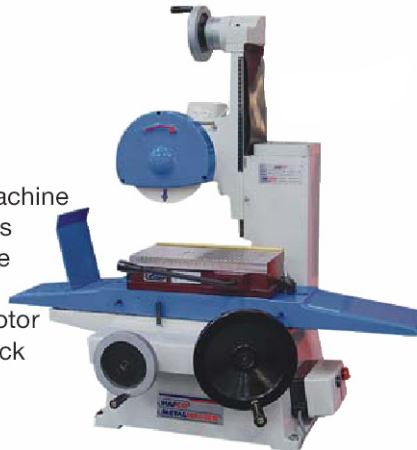
**TYPICAL ANCILLARY EQUIPMENT FOR SURFACE GRINDING**

**SG-320 SURFACE GRINDER**

**MANUAL TABLE FEED**  
300mm x 150mm

**FEATURES SG-320**

- Precision workshop machine
- Ball bearing table slides
- Angular contact spindle bearings
- 3/4HP (550W) 240V motor
- Includes magnetic chuck (150 x 300mm)
- Made in Taiwan



**SPECIFICATIONS**

MODEL	SG-320
CODE	G202
Chuck Size	150 x 300mm
Max. Longitudinal Table Traverse	300mm
Max. Cross Table Traverse	150mm
Max. Spindle to Table	250mm
Wheel Diameter	160mm
Vertical Graduations	0.01mm
Vertical Graduations /Rev.	1mm
Spindle Motor W/HP/V	550W 3/4HP 240V
Weight (kg)	225kg

**TILTING MACHINE VICES**

- Hardened Jaws ● High Quality Finish

JAW WIDTH	OPEN	WT.
<b>3-WAY TILTING VICE</b>		
3" (75mm)	51mm	12kg
(V113)		
5" (125mm)	100mm	30kg
(V115)		



A typical television style "degaussing wand" useful for demagnetising parts