

operationsmanual

SHARPIE™ HAND-HELD TUNGSTEN GRINDER
OPERATIONS MANUAL AND REPLACEMENT PARTS LIST

from 

GRINDER MODELS:

A-PTGK-DXV...SHARPIE DX VACUUM™ GRINDING KIT

A-PTGK-DX...SHARPIE DELUXE™ GRINDING KIT

A-PTGK-DX...SHARPIE STANDARD™ GRINDING KIT



**HAND-HELD
TUNGSTEN GRINDER**



*Sharpie Standard™ Grinding Kit is pictured above



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HAND-HELD TUNGSTEN GRINDER

I N S T R U C T I O N S

Caring for and Operating Your
Portable Tungsten Grinder

Get the maximum life from your portable tungsten grinder and safely operate the unit by following the instructions below.

Safety Information:

Avoid breathing grinding dust. Use a mask while grinding or cleaning the machine.



Wear safety glasses and gloves when grinding or cutting tungsten.



Avoid electric shock. Do not operate grinder in or around water.



Dispose of tungsten dust regularly and at an approved location.



Grinder is designed to grind tungsten electrodes only.



Do not plug grinder into an electrical outlet if cord is frayed or cut.



Do not unscrew grinder head while the machine is in operation.



Remove plug from electrical outlet when changing the diamond wheel or cleaning the grinder.



Use qualified electrical technicians only to repair the unit.



When the Wheel is Worn to Where it Will Not Grind:

- ▶ Make sure the unit is unplugged.
- ▶ Loosen the disc screw (#007).
- ▶ Rotate the collet disc so the tungsten will contact another spot on the diamond wheel.
- ▶ To locate the position for the tungsten to the wheel, insert tungsten and look through the viewing slot located in the lower housing.
- ▶ When the tungsten contact position has been set, tighten the disc screw to lock the disc in place.
- ▶ When the wheel has been used up on the top surface, flip the wheel over and adjust as noted above.

- ▶ Be sure all screws and collets are tight.
- ▶ Clean the grinder head of tungsten dust periodically.
- ▶ Check the power cord for wear or breakage periodically.
- ▶ Check collets for excessive wear.

- ▶ Make sure the motor is unplugged.
- ▶ Remove the two lower housing screws (#004) and lift the upper housing assembly off the lower housing, exposing the diamond wheel.
- ▶ Lock head stock in place and loosen mandrel screw.
- ▶ Remove the screw and washer from the mandrel, reverse sides or replace wheel as needed.
- ▶ Tighten mandrel screw, replace the upper housing and tighten head screws.

Service Tips:

To Flip the Wheel:

Before Using Your Portable Tungsten Grinder:

- ▶ Inspect the grinder to ensure there is no damage to the motor, power cord, grinding head and related components.
- ▶ Ensure the proper collet is selected for the diameter of tungsten to be ground: for your convenience, two collets are stored in the top of the head assembly.
- ▶ Take care when grinding tungsten electrodes to ensure your own complete safety and of others in adjacent areas.



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Grinding the Electrode Taper:

With the correct collet in the angle disc, insert the tungsten electrode into the collet and rotate for one rotation while exerting consistent pressure so the tungsten is contacting the grinding wheel. Repeat until tungsten reaches desired angle.

Release pressure from grinding wheel after each rotation of the tungsten electrode. Releasing in this way allows wheel to cool and greatly increases wheel life.

When Changing the Diameter of the Tungsten:

Identify the proper size collet from the two stored in the top of the head assembly. Your grinder was shipped from the factory with 1/16" (1.6mm), 3/32" (2.4mm) and 1/8" (3.2mm) collets -- .040" (1.0mm) collet available as an option.

Remove collet with wrench supplied with your grinder, and switch with the collet in the angle disc assembly.



Adjustable Collet Instructions for DX™ and DXV™ Models:

The adjustable collet allows you to grind a variety of taper angles for various welding applications.

The Angle is Adjusted by:

Loosening set screw #023 will allow the brass collet holder to pivot for grinding different taper angles.

Tighten set screw in the collet holder and grind tungsten to desired taper.

If You Prefer A Long Taper:

You may have to loosen the collet disc screw #007 and lower the collet disc #022 so the point of entry of the tungsten is closer to the diamond wheel.

Be aware that the lower the disc, the longer the point. Conversely, the higher the disc, the shorter the angle.

Note: The longer angle taper will require the tungsten to set on the outer most diameter of the wheel because the longer tapers require more contact with the grinding surface.

To Move the Collet to Another Part of the Wheel When Wear Occurs:

Loosen set screw #023 and turn the brass screw to advance the collet toward the center of the wheel.

Note: You will need to reset your angle when you relocate to a new part of the wheel.



Grinding a Tip Flat:

The grinder is equipped with four holes: .040" (1.0mm), 1/16" (1.6mm), 3/32" (2.4mm) and 1/8" (3.2mm) in the top housing to produce a tip flat on the end of the tungsten electrode.

To Produce a Tip Flat:

Insert the tungsten into the correct hole in the top of the housing.

Gently press the tungsten into the diamond wheel and rotate for one rotation while exerting pressure so the tungsten is touching the wheel. Remove electrode and check for desired tip flat. Repeat as needed.

Electrodes with tip flats deliver improved arc characteristics, longer tip life, improved arc starting, and reduced tungsten contamination.



Cutting the Tungsten:

The grinder is equipped with a slot for cutting tungsten to length or for cutting off contaminated portions.

Note: To ensure the highest-quality welds, cut contaminated portions of the electrode prior to sharpening so as not to contaminate the diamond wheel.

To Cut the Tungsten

Place electrode in the angle slot so the desired portion of the tungsten to be cut lines up with the edge of the diamond wheel.

Gently press electrode until it contacts the grinding wheel rotating it to form a cut line completely around the diameter. You can cut the electrode in half but it causes excessive wheel wear and shortens wheel life.



To Extend the Life of the Wheel:

Cut a groove around the electrode approximately half the thickness of the material. Turn unit off, insert electrode into the appropriate size collet and gently snap the tungsten in two. Done properly, this procedure won't splinter or damage the integrity of the electrode material.

Note: Take care when cutting electrodes so as not to bind the tungsten by wedging it between the wheel and the machine housing.



HAND-HELD TUNGSTEN GRINDER MODELS



DXV™ Vacuum Model



DX™ Deluxe Model



SD™ Standard Model



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