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REF: Tools - 156

Buffers and Accessories

Buffing Machines

See also [Polishing Aluminum and Stainless Steel](#) in the Sportsterpedia.

Using a Benchtop Buffer

A bench buffer is great if you can take the part to it. That does limit it's use somewhat however.

Keep separate buffing wheels so you don't cross contaminate polishing compounds.
Apply the polishing compound onto the wheel. It doesn't take much.

You can tell when you need to apply more from how clean the polish surface starts becoming. ¹⁾



Polishing a rocker box top with a benchtop buffer ²⁾ ³⁾

Using a Bench Grinder

You can put an auger on a bench grinder for a buffing pad.

Apply alloy polishing soap (hold onto pad) and work away. Reapply soap every 30-60 seconds.

Work in multiple directions. Then polish with jeweler's rouge soap and finish with a wool buff on drill and

chrome polish.



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Using a Hand Buffer



Using a Dremel Rotary Tool (or similar)

The Dremel type rotary tools will run up to over 25,000 RPMs.

But you don't want to try polishing metals at those speeds.

It is best to start with around 8,000 RPMs and adjust up depending on the size of the polishing pads.

The smaller pads can run at faster speeds. Most of the pads come in either 3/8" or 7/8" OD.

Obviously the 7/8" pads last much longer if you run them at the right speed.

Top speed on them wouldn't be much over about 15,000 RPMs or the wool polishing wheels will start flying apart on you. ⁵⁾

These are nice for getting into small areas but they can leave swirlies that have to be rubbed out. ⁶⁾

You can control the swirls if you use the wool polishing pads and the buffing compound.

Try running it at little slower speed if it is still leaving swirls. Keep the pressure real light.

Let the compound do the work. Move slowly back and forth with the pads.

Straight line movement just like sanding wood grain and there should not be any swirls at all. ⁷⁾

The 1" buffing bits will fit most places and the small 3/8" felt bullet shapes fit into most screw recesses.⁸⁾



Dremil rotary tool and palm sander⁹⁾



High speed grinder and hard felt wheel¹⁰⁾



Dremil tool cut and polish action¹¹⁾

Using an Electric Drill

Use the biggest wheel that will fit the mandrel you have since the smaller ones can streak.

You can use 2" and 4" wheels on an electric drill at about 2000 RPM.¹²⁾

Those wheels won't fit into all the little spaces, so this is also limiting.

A felt buffing pad works well (better than a thumb and wider than a dremel, so no little swirls).¹³⁾



Flexible drill attachment¹⁴⁾

Wheels / Pads

Dremil Type Polishing Pads

You can buy Dremel wool polishing pads with mounting shafts from a home improvement or hardware store.

They twist onto the shaft like a nut on a bolt.

The shaft doesn't go all the way through the pad.

Eventually and after heavy use, the pads will split down the middle or twist the center out and fly apart.

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Dremil polishing pad mounted to a threaded shaft ¹⁶⁾

To help keep the pad from spinning off the shaft, you can mount it to a metal cutting wheel mandrel. Add a small washer over the attaching screw and snug it down against the pad. It doesn't have to be real tight.

Dremil pad mounted to a cutting wheel mandrel ¹⁷⁾

The mandrel and polishing shafts are re-usable.

Alternately, you can save all the worn out and broken shafts from Dremel rasps and small grinding disks. Then, re-use them as a mount for the wool polishing pads using epoxy to keep them on. The old grinding disk axles can be pushed all the way through the polishing pads and they don't split down the middle so bad. ¹⁸⁾

Once the pad is worn out, just install another one on it.

To make the pads last longer, you can use JB Weld epoxy to mount them on the original shafts. ¹⁹⁾

Buying in bulk:

For about the same price as you pay for 6 of the Dremil pads, you can order a big bag of 100 polishing pads (including a few mandrels) online (Amazon, Ebay and etc.).

They are the same pads, same quality, and last the same. ²⁰⁾

Below are some wool polishing pads that were glued to mandrels. The larger ones are the 7/8" pads. They will last a very long time mounted with epoxy. But you need to let them cure over night before use for best results. The two smaller ones laying down behind them are 3/8" pads. They are good for getting in tight places.²¹⁾



Polishing wheels for Dremil type tools²²⁾

Wheel Rake

Loading too much polish on the wheel smudges and doesn't help you cut the metal. Pressing too hard while working also gathers and compresses polish into the wheel. Use this to unload excess polish and fine metal particles from the wheel and recondition the edge.



Wheel rake²³⁾

Sanding

Scotch-Brite Pads

Scotchbrite pads can work faster than sandpaper.

They will contour to the workpiece, especially curves and round corners.

Start by wetting the pad with water and dish soap.

Go over a given part in one direction for the green pad, rinse thoroughly.

Then go over the part again at a 90° angle for the next finer grade pad. ²⁴⁾

Repeat until you're satisfied with the finish.

- Below are three grades of Scotchbrite. These can be found online or some hardware stores.
 - Your typical green (found in most kitchens)
 - Red (very fine grade)
 - Gray (ultra fine grade)



Scotch-Brite Grades ²⁵⁾

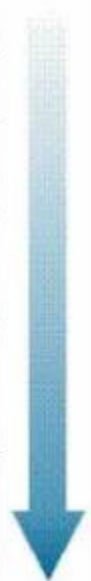


Heavy duty Scotch-Brite ²⁶⁾

Here is a general chart with different Scotchbrite grades:

3M Scotch-Brite™ Hand Pads

Number	Color	Abrasive	Steel Wool		Description	
			Grit Equiv.	Equiv.		
7445 Light Duty Cleansing	White	Flint, super fine grade	1200-1500		Excellent for fine finishes, light cleaning. One of the least aggressive hand pads.	Less Aggressive
7448 Ultra Fine	Light Gray	Silicon Carbide, ultra fine grade	800-1000	#0000	Finest silicon carbide hand pad available. Excellent for final finishing and light cleaning.	Finer Finish
6448 Light Duty	Dark Gray	Silicon Carbide, ultra fine grade			Designed to clean, finish and buff.	
7447 General Purpose	Maroon	Aluminum Oxide, very fine grade	360-400	#00 - #000	Excellent starting point to clean, finish, grain, denib or defuzz.	
8447 Production	Maroon	Aluminum Oxide, very fine grade	360-400	#00 - #000	Provides most uniform finish. Excellent for use to clean, finish, grain, denib and defuzz.	
6444 Extra Duty	Brown	Aluminum Oxide, fine grade			Excellent for conformability in cleaning, finishing and graining. Also may be used to denib or defuzz.	
7446 Blending	Gray	Silicon Carbide, medium grade	120-150	#1 - #2	Excellent to grain, clean, denib, defuzz and finish. Resistant to loading.	
7440 Heavy Duty	Tan	Aluminum Oxide, medium grade			The most aggressive and durable web. Excellent for heavy cleaning, deburring, and finishing.	More Aggressive
5440 Ultra Heavy Duty	Brown	Aluminum Oxide, coarse grade			Resistant to loading. Does not contaminate. Excellent for cleaning scale or corrosion.	Coarser Finish



Abrasive Material	Grade	Finish (micro-inch)			
		Aluminum	Stainless Steel	Grit Equiv.	Steel Wool Equiv.
Silicon Carbide	Super Fine	8-12	4-6	320-600	#00 - #000
Aluminum Oxide	Very Fine	16-35	6-12	220-320	#0
Aluminum Oxide	Medium	80-100	32-40	150-180	#1 or #2
Aluminum Oxide	Coarse	130-150	62-72	80-150	

1 micro-inch = 0.000001 inch

Steel Wool Grade	Grit Grade
#0	320
#00	360
#000	500
#0000	800

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Roloc Surface Conditioning Disc

Manufacturer: Scotch-Brite.

- Non-woven disc aggressively deburrs and finishes on all metals. ²⁸⁾
- Grades: coarse, medium, super fine and very fine.
- Combined with Roloc backing, allows for aggressive cutting.
- Open-web construction resists loading and runs cool allowing for consistent finishes.
- 3M™ Roloc™ attachment system offers quick and easy disc change-out for multi-step finishing processes.
- Silicon carbide abrasive:
 - Silicon carbide is a synthetic mineral that is very sharp and commonly used for low-pressure applications such as paint prep and finishing.
 - While silicon carbide breaks down faster than aluminum oxide, it produces a finer finish.
- Aluminum oxide abrasive:
 - Aluminum oxide is a hard, blocky mineral that provides high cut-rate and long life.
- Mandrel and rubber backing pad are a separate item to the disks.
- Used for deburring, blending, finishing, grinding and surface prep.
- Also can be used to deepen the valve clearance eyebrows in the heads (if required). ²⁹⁾



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¹⁾
biknut of the XLFORUM <http://xlforum.net/forums/showthread.php?t=494417&page=2>

²⁾
photos by biknut of the XLFORUM <http://xlforum.net/forums/showthread.php?t=494417>

³⁾
<http://xlforum.net/forums/showthread.php?p=2624171>

⁴⁾ ³⁰⁾ ³¹⁾
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⁵⁾ ¹⁵⁾ ¹⁸⁾ ¹⁹⁾ ²⁰⁾ ²¹⁾
Graywolf of the XLFORUM <http://xlforum.net/forums/showthread.php?t=2070932>

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ReddTigger of the XLFORUM <http://xlforum.net/forums/showthread.php?t=494417&page=3>

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8) 12)

https://www.chuckhawks.com/harley_polish.htm

9) 22)

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https://www.3m.com/3M/en_US/company-us/all-3m-products/~/Scotch-Brite-Roloc-Surface-Conditioning-Disc/?N=5002385+3293241340&rt=rud

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