

Basic Typewriter Restoration

Frankly, I'm no restoration expert. I do simple things to make my typewriters look good, but shy away from complicated tasks. Here are a few tips I've discovered myself and learned from friends. (Thanks especially to Gregory Fischer, Paul Dobias, Lynn Myers, Joseph Pierson, George Prytulak, and Peter Weil.) Everybody, if you have more tips, send them in!

Before you do anything: Think about whether you're willing to live with the consequences if you mess up. Please don't do anything to a truly rare machine other than gentle dusting and cleaning. The best way to get familiar with restoration techniques is to experiment on an ordinary typewriter first (how about a good old Underwood No. 5?). Whenever possible, test all these techniques on a hidden surface of the typewriter before you attack the main surfaces.

For more good ideas about restoration on the Web, check out [The Typewriter Restoration Site](#).



Initial cleanup

These are happy hours for me, as I get to discover the various parts and features of my new typewriter and I start to uncover the beauty hidden under the filth. The paint on your typewriter may appear cracked and dull, but chances are that you are looking at a century's worth of tightly compacted dirt, ink, sweat, and cigarette smoke. (My Caligraph's surface looked like lizard skin when I first found it.) If you can manage to remove that layer of crud, you may find that the underlying paint job is still smooth and can be made to gleam. If you're unlucky, the crud will turn out to be a layer of varnish applied at the factory, which has grown wrinkly and brown with age; that can be very hard to remove. Of course, if you're lucky enough to find a typewriter has been kept in a case, this won't be an issue -- it just needs a little loving care. In any case, you'll find the following items useful:

- Soft, clean, white rags. You'll go through a lot of these.
- A toothbrush and a nail brush can be helpful.
- Soft Scrub is a gentle liquid cleanser which is easily available. To remove heavy dirt, try applying diluted Soft Scrub with a finger, and removing it with a rag, over and over and over. Careful: some finishes will be scratched even by this cleanser. But my Caligraph required vigorous scrubbing with undiluted Soft Scrub!
- Steve Maloney reports that "Gojo," a hand cleaner, is excellent for cleaning original lacquer black.
- For a gentler initial cleaning on a basically clean machine, try Endust or Pledge (be cautious around decals, as occasionally these products can harm them).
- For an even gentler and safer cleaning, simply use a few drops of dishwashing liquid dissolved in water.
- Window cleaners are **not** recommended, as they can sometimes harm or remove paint.
- Q-tips are very nice for cleaning hard-to-reach areas.
- Instead of using Q-Tips, you can also roll your own swabs using wooden applicator sticks (6" long x 1/16" diameter) and cotton batting. Bamboo skewers work just as well, and they last for days/weeks. One roll of cotton batting will yield about a million swabs. As soon as a swab is dirty, you pull it off and replace it. The most important thing is to use damp--not wet--swabs. You can

achieve this by rolling a wet swab on a piece of blotting paper. By doing this, you avoid flooding the surface, and water won't seep into all the wrong places.

- For greasy accretions and gunk (eraser crumbs, flakes from Liquid Paper, etc.), you can use mineral spirits (e.g., Varsol or Stoddard Solvent, available at paint stores). Brush the mineral spirits on, using a natural-fiber brush which is bonded onto the handle with metal, not plastic. The machine should then be GENTLY blown out with an air compressor. Then apply a light lubrication to moving parts.
- For initial dust removal, the vacuum-cleaner hose attachment kits sold in computer and computer supply stores and catalogs work very well. They are especially helpful in cleaning mechanical parts. One such kit is the Mini Vacuum Cleaner Set sold by Miles Kimball, 41 W. 8th Ave., Oskosh, WI 54906, tel. (414)-231-4886. It's item # 55704 and costs \$ 9.98 + \$ 2.99 shipping.
- You can also just take your dusty old typewriter down to the gas station, and take advantage of their compressed air. (Probably not a great idea for rare typewriters.)
- For more precise blasts of compressed air, buy a canister intended for cleaning electronic equipment (these are available at most office supply stores).
- Platen cleaning: after an initial wiping, several brands of rubber/plastic restorer made for cars work quite well (e.g. Armor All). However, none will make a browned, aged platen turn black. If one is concerned about the preservation of an old platen, probably there are chemical-effect risks involved in the use of inks to dye the platen. To recover a platen, see "Mechanical repairs" below.
- Fedron is a heavy-duty solvent that really cleans type and platens. If you can find a dauber (like the type used for liquid shoe polish) spread a thick coating on the type and let it work for about a minute or two, then wipe off with a rag. For the platen, if the platen can be removed, put some Fedron on a rag and wipe the rubber off. It instantly removes dirt, ink, and rust marks. Fedron is harsh: be sure to keep it away from paint, decals, and all delicate parts and materials (such as string and plastic). Use in a well-ventilated area: it stinks!



Touching up paint and metal

The typical deep-black color of an early typewriter consists of lacquer, which is quite difficult to restore. Enamel paint was introduced in the 1920s. Typewriters also have many metal parts which are susceptible to rust and discoloration. The shiny metal parts of older typewriters are nickel-plated; newer machines are chrome-plated.

- Here's a really easy way to touch up small spots of black paint (which is by far the most common color on early typewriters): use a permanent black marker. This is easy to apply, lies flat on the surface, and can make a big difference. I even "repainted" a whole discolored, gray platen on an old Royal this way, and it made the typewriter look much fresher. Purists will probably squirm at this suggestion -- so go ahead, sue me! But even I wouldn't do it on a rare machine.
- What if you want or need to use real paint? Touch-up paint for cars, which is sold in tiny bottles in auto shops, can be handy here. It dries to a glossy finish and is not thick or clumpy, as long as it's shaken enough in advance. But take a good look at your typewriter in the sunlight after this paint has dried -- you may find that it's not really as black as the original paint. What other sorts of paint have people found useful? Let me know.

- "The paint pen to use is Uni-Paint medium line PX-20 (or fine line if you prefer) Opaque Oil Base marker. You can order them at Staples in just about any color of the rainbow. They only take a day or two to get." -- Robert Nelson
- "For coatings touch up, ensure that surfaces are free of oils, buff exposed substrate materials with an abrasive pad, and recoat with nail polish. The 'anchor tooth' from abrading will ensure adhesion, but your requirements probably won't be higher than a simple visually detected surface profile. Nail polishes come in many shades, so you should be able to get your exact match. Also, they have a tendency to set up a little thicker than some of the automotive paints, which adds to the depth and luster of the color to better simulate the multiple layer effect of lacquers." -- Paul Dobias
- "Goo Gone" can remove unwanted paint that has been added by a previous owner, revealing the original paint and decals below.
- Many early typewriters are decorated with pinstripes -- often these are thin parallel lines of blue and yellow. Beugler offers a kit for precision pinstriping with paint. Other pinstriping supplies are available from Finesse Pinstriping. You can also find pinstriping decals at many hobby shops, or order them from The Antique Phonograph Supply Co., Route 23, Box 123, Davenport Center, NY 13751-0123, phone 607-278-6218.
- One person who can professionally re-enamel old machines and apply new pinstripes is David Teti, 5 Water Street, Torrington, CT 06790. Phone (203) 489-6411(o) and (203) 482-6138(h).
- Bits of gold may be missing from the decals or lettering. One amateurish solution is to touch them up with a fine-point metallic gold marker. This is easily scratched off, but for the beginner that's probably a virtue. The metallic marker really can improve the neatness of your typewriter if it's used wisely.
- For nickel-plated surfaces, super-fine steel wool can work wonders. Be warned: it sometimes will leave fine scratches, or will remove nickel that is on the point of flaking off anyway. But it makes most old typewriters look much better by removing the light rust, mold, and miscellaneous grunge that stops the nickel from shining. When using steel wool you should try not to get all the little filings into the mechanism; cover up the nearby mechanical parts with a rag, or simply remove the parts you are cleaning, if that can be done easily.
- Instead of using a steel wool pad, you can try a "greenie meanie"-type synthetic scrubbing pad. You won't wind up with metal filings inside your machine from the steel wool pad. However, sometimes these synthetic pads are actually scratchier and rougher than steel wool.
- Many collectors also use wire wheels that attach to power drills. These are very effective at stripping away grunge (and paint!). Wear goggles while using them, as the little bits of wire will fly all over the place.
- For minor rust removal, try using an electric eraser (also known as an "architect's eraser"). Koh-I-Noor and Staedtler both make fairly inexpensive models with a variety of eraser refills. The gray, ink erasers are the most aggressive. The soft, white refills are especially good for removing light surface dirt and oxide layers (practice on a tarnished penny!).
- For a gentler treatment of nickel, try Turtle Wax Chrome Polish and Rust Remover. It smells nasty, but it does a good job of cleaning lightly soiled nickel.
- Another metallic marker tip: the silver metallic markers can be used to cover up small patches of rust that have worn away the nickel. This is not a durable covering, and it won't be glossy like the nickel -- however, the change in color may really improve the overall appearance of the nickeled part.
- It's also possible to get nickel parts replated. You may want to consult a professional, but a home replating kit is made by Vigor-Bestfit, 320 Thornton Road, Lithia Springs, GA 30057. Phone 770-944-2733, fax 770-944-2765. The kit is available at Zak Jewelry Tools, 55 West 47th Street, New York, NY, phone 212-768-8122.
- The rubber feet on old typewriters are often damaged or missing. Bob Aubert offers replacements: "I have new black repro feet available for the following typewriters. Oliver Models 1 - 11, Royal

Flatbed Models 1 - 5, Royal 10, Underwood Models 1 - 5, LC Smith Models 1 - 8, Smith Premier Models 1 - 10, Columbia/Barlock Models 1 - 20, Yost Models 1 - 4, Williams Models 1 - 6, Wellington Models 2 & 3, Remington Standard Models 2-7, Remington Pop-up Portable Mounting Grommets, and some portables which use round feet. At the present time, I don't stock any square or rectangular feet. Prices vary from \$6.00 to \$12.75 per set, postpaid within the US, depending on type and whether or not the mounting hardware is needed. Discounts provided for quantity purchases. E-mail at rite2aubert@juno.com or call me at (856) 461-7080. Note: There are two different sizes of stepped feet available. These may be suitable for other machines which are not listed above. The first will fit anything which has 1/2" mounting holes. The other requires 5/8" holes. Some machines need a size other than the those just mentioned. Either can be sanded down to fit using an electric utility drill and a home made holding jig in just a few minutes. Detailed info on how to do it is supplied with purchase."



Polishing

Here's the erotic part. Loving applications and re-applications of polishing agents will leave your typewriter looking glossy, fresh and grateful. You'll be amazed at the difference!

- For a safe, effective finish, museums use Renaissance brand microcrystalline wax. It's made in England, and fairly expensive. The main supplier for North America is Conservation Materials Ltd., 240 Freeport Blvd., Box 2884, Sparks, NV 89431. Tel. 702-331-0582. They take Mastercard and Visa. Their catalog number for the wax is 3950-230. Apply and buff the wax with clean cotton cloths -- diaper flannel is ideal.
- A good alternative is a commercial blend of microcrystalline waxes, in paste form, such as Johnson's "Klear" or "AeroWax."
- Mother's Carnauba Cleaner Wax (available in auto supply stores) works nicely. Other car waxes, such as Turtle Wax, can also work well.
- Wax can be removed with a cloth dampened in mineral spirits (such as Varsol and Stoddard Solvent). Use in a well-ventilated area.
- Pledge is an easily available polish that is usually safe on typewriters (but sometimes has been known to harm decals!). I use Pledge as a cleaning and polishing agent. Spray it on a clean rag, wipe the part you're polishing thoroughly with the rag, repeat until the rag doesn't look brownish at all. However, I have been warned that overuse of Pledge and other aerosols can leave a sticky residue. Commercial polishes can also contain silicones that may be impossible to remove later. Endust claims that it contains no silicone.
- I've also heard that Fantastick works well as a polish and cleaner.
- "For typewriters that have textured finishes, I would not recommend using furniture polish. I have found that the best way to clean these surfaces without buffing down the textured finish is to use a 'fingernail' brush and a solution of baking soda and mild dishwashing detergent. I am liberal with the baking soda and conservative with the dishwashing detergent. The dishwashing detergent is mainly there for removing oils. You might be surprised how much dirt gets accumulated in these textured finishes." -- Paul Dobias

Mother's Mag & Aluminum Polish (available at auto parts stores such as Pep Boys) is an excellent

cleaner and polish for metal parts both large and small. On machines with a lot of aluminum (such as the Blick 6 or Hammond Folding) this stuff can work a miraculous transformation.

- Other metal polishes include Flyt (available at gun shops) and Simi-Chrome (which has been highly recommended to me for aluminum -- ask at auto supply shops).



Mechanical repairs

Manual typewriters operate on relatively simple principles, and you can usually figure out what's wrong with patient investigation and some screwdrivers. But don't underestimate the need to keep track of all the parts you remove! You can easily find yourself with a pile of parts that you can't fit together again. Again, more advanced collectors are welcome to add their two bits to this section. As for typewriter repair shops, I've started a [list of them](#).

- You may want to invest in a set of gunsmith's screwdrivers. They are available in boxed sets with up to 58 interchangeable bits, as well as ultrathin sets. This allows you to find a perfect fit for every slotted screwhead, so damage is less likely to occur. The best source for these screwdrivers is Brownell's, Inc., 200 South Front Street, Montezuma, Iowa 50171; tel. 515-623-5401; fax 515-623-3896. Check out their "Magna-Tip Super-Sets." You'll wonder how you managed without them. About \$82.00, but they'll last a lifetime.
- Sears sells very useful sets of Craftsman tools meant for repairing computers and other electronic equipment. The tools are hard steel, many have fine tips, and an ample variety of screwdrivers is included.
- Light oil such as 3-in-1 will improve the functioning of many parts. Apply very sparingly, with the end of a pin or paper clip.
- "When performing cleaning and lubrication, I would recommend following up after degreasers and lighter oils with a heavier oil. Also, oils used around chipped and delaminating coatings may contribute to further delamination. For instance, for blowing out dusts, removing some grease buildup, and to leave behind a thin layer of lubricant, I would recommend using 'TV Tuner Cleaner,' and then follow up with a '3 in 1' type oil." -- Paul Dobias
- Instead of freeing up parts with oil, which can eventually collect dust and make the mechanism stick again, try using dry, powdered graphite. (This is **not** recommended for use on anything that has aluminum, since graphite has a high galvanic difference to aluminum and will severely pit and corrode it.)
- Fishing line can be a helpful replacement for carriage pull strings, as can "dial cord," sold by Radio Shack. The best kind of cord will be a kind that (unlike fishing line) has no give (does not stretch out).
- Feed rollers are often hardened or have developed "flats" from being pressed against the platen for decades. To rebuild feed rollers, strip the rubber from the metal core. Cut sheets of very thin latex to the right width, use soap to wash off the powdery substance that coats the latex, be careful not to completely rinse it off, and roll it around the metal core while just barely dry. The latex bonds to itself.
- Platens will be recovered in rubber at a very reasonable price (around \$15, depending on the platen size) by the [Ames Supply Company](#) (phone 1-800-323-3856). Ship your platen to:

Ames Supply Company
 1936 University Lane, Unit C
 Lisle, IL 60532
 attn: platen department

Include a note with your phone number, and they can call you with the total price, including shipping and handling for returning the platen; you can then pay by check or credit card. Or they may simply do the work and send you an invoice with the refurbished platens (expect about two weeks).

- Baco Ribbons, 2914 Brentwood Blvd., St. Louis, MO 63144, 314-968-2258, will also recover platens.
- Bob Aubert suggests using neoprene vacuum hose to recover your own platens. "I've done it this way at least a hundred times and it works! Simply take your old rollers to a auto place, ask to see their hose stock, pick something that is close and it will be just fine. Shop for a brand that is smooth on the outside! Cut it roughly to size, slip it on, put the shaft into an electric drill, and trim the excess off with a razor while it's turning. It will look like it was done in the Remington factory!"



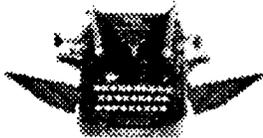
Typing

So now you're ready to do some actual typing with your machine! Even if you're not going to use it for everyday correspondence, it's nice to know that it's functioning and "alive" once again. You need to deal with a few issues such as inking, clean types, and alignment.

- Ribbons for most typewriters can be found as close as your nearest office supply shop. The standard width is half an inch, and you'll find that this will work on almost all typewriters made after 1920 or so. If your typewriter can type in two colors (and most can), buy a black-and-red ribbon: it looks nice! For providers of specialty ribbons (silk, etc.), see my FAQ.
- Odd-size ribbons: try ribbons made for computer printers, printing calculators, time clocks, and cash registers.
- Ink rollers for Blickensderfers and other ink-roller machines can be procured at a good office supply shop. Buy rollers made for printing calculators. (The Porelon PR-50 roller will work.) You'll have to cut them out of their plastic housing, and the price is a little steep (\$3 or \$4 for one roller -- the original Blickensderfer price was 25 cents a dozen!). And your fingers will get filthy. But it'll all be worthwhile when you see what nice work your old typewheel machine can do.
- Hammonds originally came with a rubberized cloth impression strip that came between the hammer and the paper. It is usually missing or broken, but it is necessary in order to get good typing. Paul Robert recommends: "If there is a bicycle shop in your area, go there and buy one of those narrow rubber protection strips that go around the wheel to protect the inner tube from being punctured by the spokes. Cut off a piece one half inch shorter than the full length of the carriage, punch two holes on each side and you have the perfect impression strip."

- Ink pads for machines like the Williams: I want to look into this, but haven't done research yet. Don't replace an ink pad unless you really want to use the machine, as in the long run the chemicals in the ink can corrode the type! A piece of black felt cut to the right size will look very nice.
- To make sure your types will print clearly, you'll probably need to clean out the crevices of letters like "e" and "s." Just use a pin.
- For heavy-duty type cleaning, try Fedron (see above under "Initial Cleanup").
- Alignment may be a problem in an old typewriter. The typebars may stick at the printing point, because they're too far to the right or left. The Oliver may produce especially wacky-looking work because of the nature of its typebars. The only solution is to bend the typebars back into position, using guesswork and experimentation and care. If you're lucky, you can find some specialized tools for gently bending typebars; otherwise, try pliers.

Enjoy!



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