

| Window Conditions & Repairs Rating System | | For homeowners interested in repairing their historic windows, this rating system was compiled based on skill level and material costs. | | | | | Check your state and local codes before starting any project. Neither the HCBA, any contributors or retailers can be held responsible for damages or injuries resulting from the use of the information in this document. | |
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| Repair Level | Issue | Solution | DIY | Professional | Time | Material Cost | Resource | Notes |
| 1. Basic | A. Mold/Mildew : Symptomatic of and encourages moisture retention, hazardous to health, prohibits operability | Clean mold/mildew with a heavy-duty cleaner or a mixture of detergent & water. Allow to dry and then sanitize with a bleach solution (1/4 c. bleach per gallon water). | ✓ | ✓ | 15-30 min. per window | Bleach \$5; heavy duty cleaner: \$5-15 | Any local hardware or grocery store, http://www.epa.gov/mold/cleanupguidelines.html | Non-porus materials such as solid wood can usually be easily cleaned of mold. |
| | B. Missing Hardware : Prevents the window from operating properly & conveniently, which can lead to deterioration | Seek replacement(s) that match original and install new hardware. | ✓ | ✓ | 15 min. per window | Hardware ranges from \$2-25 | Local hardware store, Rejuvenation, House of Antique Hardware, Kilian Hardware, thehardwarehut.com , architectural salvage | See Glossary for hardware types and descriptions |
| | C. Squeaky Hardware : A pulley , metal sash chain , meeting rail lock , or latch that squeaks or is difficult to operate | Apply "lube" like WD-40. Spray affected area, open & close the device several times to get it worked into the hardware and evenly applied. Repeat until it is easier to operate and no longer squeaks. Wipe excess. | ✓ | ✓ | 5 min. per window | WD-40 \$5 | Any local hardware store, Amazon.com, http://www.ehow.com/how_7857480_lubricate-old-interior-door-hardware.html | Lubrication will only help if the hardware is clean and free of excess paint and rust. See Intermediate Conditions for a guide to over-painted and rusted hardware repairs. |
| | D. Small Air Leaks : These are small areas around the window where air drafts cause discomfort and energy loss. | Weather-stripping tape, felt and/or removable caulk are highly effective ways to temporarily reduce air infiltration around small gaps in windows. Feel for drafts at the perimeter and meeting rail. Follow packaging instructions for proper installation. If A/C units are left in place during colder months, be sure to cover any gaps to help reduce drafts. | ✓ | ✓ | 15-30 min. per window | Foam weatherstrip tape \$5-15; removable caulk \$8-10; caulk gun \$10; A/C unit cover \$5-10 | Any local hardware store, Amazon.com, http://www.acehardware.com/info/index.jsp?categoryId=1282811&backTo=3440730&savePath=2568443.2568451.2626208.2626341.2627448&infoType=infosport | Depending on the specific type, these forms of weatherstripping may be temporary solutions and will need to be replaced. Permanent weatherstripping options are addressed in Advanced Conditions below. It is best to remove and store A/C units in colder weather. |
| | E. Over-paint on Glass : Careless and sloppy painting make windows look dirty and unfinished. | Use window cleaner or dish soap solution and a straight edge blade to carefully scrape old paint off of the glass. | ✓ | ✓ | 5-15 min. per window | Window cleaning solution \$3-10; Utility Blade \$3 | Any local hardware store, http://www.freewindowcleaningtips.com/paintremoval.htm | Be very careful to lay the straight edge blade flush with the glass so as not to scratch the glass. Never scrape with a dry blade: always scrape a wet/slippery surface. |
| | F. Storm Window Check : Without proper maintenance, a storm window 's efficiency can be greatly diminished and may allow or cause damage to the primary window frame. | Be sure that storm windows are properly closed and caulked around the exterior perimeter. The storm window weep s (small holes at the sill) and the space between the window and storm should be clear of dirt, debris, and caulk in order to properly vent and discharge moisture. | ✓ | ✓ | 30-45 min. per window | Caulk \$8-10; Caulk gun \$10 | Any local hardware store, Amazon.com, http://www.thisoldhouse.com/toh/article/0,,476717,00.html | If there are no storm windows or the existing storms do not function properly, see Advanced Conditions for a guide to finding new storm windows or repairing damaged storm windows. |

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| 2. Intermediate | A. Flaking Paint : Painted windows may be alligatoring , chipped or flaking , which can cause dirt and debris and leave the wood beneath vulnerable to moisture damage. | Wear a dust mask, eye protection and work gloves. Use a paint scraper to chip off and remove any loose or flaking paint. Sand using medium grit, then fine grit to even out areas. Wipe sash clean of all dust and debris and prime with a thin coat of paint. Once dry, apply a thin top-coat of finish color. | ✓ | ✓ | 1-2 hours per window | paint scraper \$3-10; sand paper \$5-10; qt. of oil-based paint \$20-30; qt. water based paint \$15-30; paint brush \$5-15; lead paint test kit \$20-40 | Any local hardware store, Amazon.com, specialty paint store, etc. http://www.acehardware.com/info/index.jsp?categoryId=1284544 ; http://www.epa.gov/lead/pubs/renovation.htm | *Any building constructed prior to 1978 is likely to contain lead paint . Please take proper safety precautions when removing lead-containing paint finishes. If the repair areas are small, this can be done with the window in place. However, if the entire sash needs to be refinished, it should be removed for best results. See Advanced Conditions below for over painted woodwork repairs. |
| | B. Sashes Painted Shut, Not Locking : A window may be painted, caulked, or sometimes even screwed or nailed shut. This makes the window inoperable and often times has been done without closing the window properly beforehand. This may prevent it from locking and cause air and moisture infiltration. | Use a utility knife to cut paint at seams or remove caulk where sash may have been fixed. This most commonly occurs at the perimeter of the top sash. Check that the sash moves up and down so that the window may close properly and lock securely. Use fine grit sand paper to smooth cut edges and touch up with paint for a finished look. | ✓ | ✓ | 15-30 min. per window | utility blade \$3-5; sand paper \$5-10; window-opener saw \$5-10 | Any local hardware store, http://www.thisoldhouse.com/toh/video/0,,20053941,00.html | If the sash are painted shut but locking properly, there may be no need to free them; consider their daily, seasonal and emergency uses. Be aware that hidden conditions may arise once the sash is free. If the sash are nailed or screwed shut, refer to Advanced Conditions below for damaged woodwork repairs. |
| | C. Over-painted or Rusted Hardware : Too many layers of paint can make window hardware hard to use. Hardware may also be dirty and deteriorating due to the presence of rust. | For over-painted hardware, carefully remove from the window. Line a crock-pot with aluminum foil and immerse hardware in a solution of water and a couple tbsps liquid laundry detergent. Heat on medium and let soak for 1 day and remove paint with a nylon brush. Polish or finish as desired. For more stubborn paint, soak in a chemical stripper. If the hardware has rusted, clean with a rust removal product, wash, dry and refinish as desired. Mild rust may be removed by soaking hardware in vinegar and scrubbing with a nylon brush. | ✓ | ✓ | 2 hours - 1 day, vinegar method may take from 10 minutes to overnight | Liquid laundry detergent \$10; quart. chemical stripper \$5-15; rust remover \$10-15; beeswax furniture polish \$10; metal polish \$10 | Any local hardware store, Amazon.com, specialty paint store, auto body supply store, http://www.thisoldhouse.com/toh/how-to/intro/0,,20055784,00.html ; http://www.epa.gov/lead/pubs/renovation.htm | When using a chemical stripper, always protect your hands, skin and eyes. Work in a well ventilated space and follow manufacturer's instructions and proper disposal practices. Follow manufacturer's instructions for wait time and safety. If the hardware has several coats of paint and is rusting, it can also be sandblasted and professionally refinished. |

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| 3. Advanced | A. Broken Glass & Flaking Glazing Putty : A cracked or broken pane of glass is insecure and unsightly. Flaking or missing glazing putty causes dirt and debris, makes the glass more susceptible to breakage and exposes the wood sash to water. | Chip out old glazing putty with putty knife or use a heat gun to soften and remove putty (cover unbroken glass with aluminum foil to prevent cracking from intense heat). Remove glazing points and broken glass. Paint glazing channel and reinstall new glass and points. Knead new glazing putty with hands to soften, and apply to glazing channels. Remove excess with a putty knife, shaping to a smooth bevel, and allow to dry. Paint putty bevel with a thin finish coat to match the sash. | ✓ | ✓ | 1-3 hours per window plus 1 day drying time for the glazing putty prior to painting | Putty knife/paint scraper \$3-\$10; heat gun \$20-40; glazing points (depending on quantity in packet) \$10-30; push mate for glazing points \$10; 1 pint of glazing putty \$5-10; aluminum foil \$5; *regular glass 32" x 30" \$32; *obscure glass 28" x 30" \$70 | Any local hardware store, Amazon.com, Torstenson Glass Co., Evanston Glass, LaSalle Glass & Mirror, Economy Glass Co., etc. http://www.thisoldhouse.com/toh/how-to/intro/0,,20052038,00.html | When removing glass and reglazing a window, it is best to remove the entire sash. This requires that the interior stops be removed and the weights detached. Any broken glass should be replaced in kind, as something different may cause the sash to weigh more or less than before and become improperly balanced . *Glass prices vary depending on composition, thickness and size. |
| | B. Missing or Damaged Sash Cords/Chains : This prevents a smooth window operation and is unsightly. | Remove the interior stops and pull the sash out from the frame, detaching any cords or chains from the sash. Carefully release the cord and allow the weight to fall to the bottom of the weight pocket . Open the weight pockets. Feed new cord or chain into pocket from pulley above and attach to weight. Adjust to necessary length and attach to sash . Check for smooth operation and make necessary adjustments. Close weight pocket and reinstall interior stops. | ✓ | ✓ | 1-2 hours per window | Cotton sash cord \$5-15; solid brass sash chain \$3-4 per linear foot; sash weights \$4 per pound | Local hardware store, Rejuvenation, House of Antique Hardware, Kilian Hardware, architectural salvage, http://www.thisoldhouse.com/toh/video/0,,1631564,00.html | If the sash chains have been painted, they might be salvageable. Refer to paint removal techniques listed in Intermediate Conditions above. |
| | C. No Storm Windows : If the storm windows are in poor condition or there are no storm windows at all, new storms will provide an extra insulating layer and protect your window from weathering due to wind, rain, snow and sun. | When ordering new storms, there are many considerations. Refer to our Storm Window Guide to see which option may be best for your windows. | | ✓ | N/A | Refer to Storm Window Guide | Refer to Storm Window Guide , http://www.thisoldhouse.com/toh/article/0,,476717,00.html | Refer to Basic Conditions above for information on storm window maintenance. |
| | D. Rattling, Racking Sash & Air Leaks : If there are large gaps around the window sash, this can cause them to rattle in the wind, lift unevenly and stick when opened. Air leaks also cause energy loss and discomfort. | The gap between the sash and the jamb is best sealed with a permanent metal weather-stripping . This should be applied to the perimeter and meeting rail of the window and may require slight modification to the wood sash to accept the new weather-stripping. Once this is installed, slight adjustments can be made to make sure the sash fits securely in the opening. | | ✓ | 30-90 mins per window | Interlocking metal weather-strip \$2-4.50 per linear foot; Spring Bronze weather-strip \$1-1.50 per linear foot | Kilian Hardware, Accurate Metal Weatherstrip Co., Dorbin Weatherstrip, http://www.oldhousejournal.com/magazine/1562 | If permanent weather-stripping is not desired, other adjustments to the interior stops or sash may decrease the amount of rattling. Refer to Basic Conditions above for temporary weather-stripping repairs. |

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| 3. Advanced (Continued) | E. Over-painted Woodwork : Layers and layers of paint build-up can decrease the ease of window operability and make them stick. It also gives them a muddy and dirty appearance by reducing the fine lines of historic wood windows. | When there are many layers of paint, it can take a lot of time and effort to hand strip with heat or chemicals. To save time and effort, most professionals will dip the entire sash in a chemical stripper to remove paint. Complete stripping and refinishing is an extensive DIY project, one reserved for the most patient and committed homeowners. | ✓ | ✓ | By Hand: 1-2 day per window; Dip Strip: 1/2-1 day per window | Paint scrapers \$3-10; sand paper \$5-10; qt of oil-based paint \$20-30, qt. water based paint \$15-30; paint brush \$5-15; chemical paint stripper \$5-40 per container; lead paint test kit \$20-40; *Use our Window Repair Resource Guide to contact professionals for an individual quote | Any hardware or home improvement store, amazon.com, specialty paint store; http://www.epa.gov/lead/pubs/renovation.htm | *Any building constructed prior to 1978 is likely to contain lead paint . Please take proper safety precautions when removing lead-containing paint finishes. When stripping and refinishing windows, it is best to remove the entire sash from the frame. This requires that the interior stops be removed and the weights detached. Wear a dust mask, eye protection and work gloves when doing this work. Work in a well ventilated space and follow manufacturer's instructions and proper disposal practices. |
| | F. Missing or Damaged Woodwork : Any number of things may have caused damage to the sash and woodwork . The joints may be separating, pieces of trim may be missing or warped, and there may be gaps or holes. All of these issues decrease the operability of the window and can let in drafts. | If a piece of trim or sections of millwork are missing, an experienced carpenter can mill a new piece to match. Some elements may need to be deconstructed and reconstructed using better fasteners or wood glues. Woodwork can also be filled or patched in areas where there are holes or chips. | | ✓ | 30 mins to 1 day per window | New interior stop \$0.66 per linear foot; exterior brick molding \$2 per linear foot; window casing \$1 per linear foot; new interior sill and apron \$6 per linear foot; new exterior sill \$5 per linear foot; wood filler \$5-10; *Use our Window Repair Resource Guide to contact professionals for an individual quote | Any home improvement store or lumber yard | |
| | G. Water Damage, Infiltration or Rot : If there is water damage or rot in the window, this is usually a sign of larger water management problems. If wet wood is not allowed to dry out, it will begin to rot and damage other areas of your window and frame. | When dealing with water damage , it is important to call a professional. They can help determine where the water is coming from and how it can be stopped. If the wood is only damaged, it can be salvaged and refinished. If there is rot , an experienced carpenter may be able to cut out the damaged area and either apply an epoxy or wood filler or install a " Dutchman " patch repair. Each case is different and entire pieces or elements may need to be replaced depending on the level and extent of damage. | | ✓ | Time varies depending on condition | New interior stop \$0.66 per linear foot; exterior brick molding \$2 per linear foot; window casing \$1 per linear foot; new interior sill and apron \$6 per linear foot; new exterior sill \$5 per linear foot; wood filler \$5-10; *Use our Window Repair Resource Guide to contact professionals for an individual quote | Any home improvement store or lumber yard, http://www.thisoldhouse.com/toh/asktoh/question/0,,354386,00.html | |