

# The University of Iowa Libraries Preservation Department

## MISSION STATEMENT

The Preservation Department supports the University research mission to acquire, organize and deliver information by maintaining collection resources in useable condition. The Preservation Department will respond promptly to any concerns with the physical care of collections.

## OVERVIEW

The Conservation Department was established in 1985. The Preservation Department was established in 1987, drawing together various preservation activities previously carried out in other departments. In the early 90's Preservation and Conservation were merged into a single department as a part of a library wide reorganization. The current Preservation Department consists of three units; Conservation, Assessment/Reformatting and Binding/Marking all under the administrative head of the Preservation Librarian.

The Preservation Department is responsible for activities that relate to the care and handling of Library materials, both circulating and non-circulating. Services include commercial and in-house binding, repair, marking, attaching security tapes and in-house and processing for vended reformatting and vended book alkalization. The Conservation unit provides specialized treatments.

The Preservation Department also provides services aimed at improving the storage condition of the collections including environmental monitoring, emergency planning and preparedness, salvage response and staff and user education.

## FACILITIES and STAFF

The Department consists of two facilities in Main Library totaling 4,500 square feet. The Preservation Librarian's office is located in the Administrative area at Main.

Our central facility accommodates item identification marking, bindery preparation, assessment/reformatting for damaged materials and book repair. Book repair includes a work station for double fan adhesive binding repair and in house binding. The assessment and reformatting operation includes our preservation photocopy using a Sharp 286 copier and imaging work area with PC, Minolta PS 7000 scanner using Elan GMK "Precise Page Positioning" application for imaging. Bindery preparation uses the LARS based bindery interface and the Binding/Marking unit provides various terminals to our Aleph/ExLibris based InfoHawk library system.

The conservation lab provides flexible work space for treatment projects including aqueous treatments, fume hood and testing work. Exhibit preparation and document encapsulation services are provided. Lab management services include monitoring of storage conditions using the ClimateNotebook/PEM system. The conservation lab also accommodates a University of Iowa Center for the Book course in the "Structure of the Handmade Book" and manages the University of Iowa Bookbinding Model Collection.

The staff for 2004 is: Nancy Kraft, Preservation Librarian; Deb Miller, Binding/Marking Supervisor; Gary Frost, Conservator; Kristin Baum, Assistant Conservator; Bu Wilson, Assessment & Reformatting; Susan Hansen, Book Repair Supervisor; Angela Halverson, Marking; Sara Sheller and Ben Bessman, Binding.

## TREATMENT SERVICES

The Preservation department provides various standard conservation treatments and protective enclosures for the preservation of library materials. We hope this quick reference listing of treatments and enclosures will answer your initial questions and suggest useful options for damaged or vulnerable items.

Circulating collection items should be routed to Preservation. Special Collections items should be routed to the Conservation Lab.

### Repair of circulating books

- We do tip-ins of **replacement pages**, map or chart **pockets**, hand **slitting for double fan binding** and tape **repair of tears**. These methods prevent loss of pages and loss of content. In addition we can reproduce needed replacement pages from ILL. We can also install pocket types for computer media. Hand slitting is desirable for bindery items that contain illustrations extending into the gutter.
- For a hard back book with a loose cover, our **hinge tightening repair** is speedy and effective. The cover to text attachment hinge is re-adhered and the joints re-set between edged boards.
- Our **pamphlet binding** provides easy shelving and rigid protection for thin imprints. The transparent front cover facilitates paging and browsing.
- The **re-back repair** and **full repair** methods are used for damaged books. The damage may be detached boards or detached spine and the initial leaves may be loose as well. Just send these to us for speedy repair.
- Our **Quick Bind** provides a utilitarian binding for photocopies. We double fan adhesive bind the pages and provide a cloth and board cover. This treatment is used for materials that need quick turnaround, such as reserves.

### Repair of special collections books

- Our **hinge repair** method for leather covered books applies a colored repair tissue using an acrylic adhesive dissolved in alcohol. This is a tidy board re-hinging that is quick and unobtrusive.

- The standard collection maintenance **repair for books**, CMR for short, provides text consolidation, cover repair and reinforcement of the cover to text attachment. It is adapted to many publishers' bindings and assures a non-damaging opening action for texts with weakened paper.
- Our **map mounting** method is a conventional pasted, kozo fiber paper backing. It is useful for overall support and mending of map that must be refolded into books.

#### Protective enclosures

- A simple protective enclosure is provided by our **shrink wrapping**. This wrapping can be used in lieu of repair for little used books. It also provides shelving stability and compacting. Books opened for use are returned for re-wrapping.
- Polyester encapsulation is available for protective enclosure of high use documents, graphics and maps.
- The CoLibri polyethylene **book jackets** protect and secure publishers' jackets and paperback covers. The CoLibri covers are durable and do not interfere with reading and photocopying.
- A **photo portfolio** is provided for vulnerable, large format photo prints. This enclosure provides both a storage container and display mount.
- A **pamphlet enclosure** is especially protective for valuable periodicals and ephemeral publications. It is a composite enclosure with pamphlet sewing, and a protective portfolio mounted within a cloth covered case.
- We also produce both a cloth covered and an uncovered clam shell **book box**. These enclosures are dimensioned to fit each item and they provide upright shelving for unstable or irregular items.

#### Exhibit preparation

- **Book cradling** and other exhibit preparations are provided by the Conservation Lab.
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#### Reformatting

- **Preservation photocopying** is available to produce bound replacement copies of books with brittle paper and loose leaves.
- **Preservation imaging** is available for digital capture from difficult bindings.

University of Iowa Libraries Preservation Department

## Collections Conservation PROCEDURE MANUAL

Edition 2004

The Manual is now organized under the following divisions: (1) circulating collections methods, (2) conservation lab methods, (3) in-house reformatting methods. For further information on the UI Libraries Preservation visit our web site [www.lib.uiowa.edu/preservation/](http://www.lib.uiowa.edu/preservation/)

Gary Frost, editor

August 2004

### C O N T E N T S

#### CIRCULATING COLLECTIONS METHODS

##### Book Repair

- FLAG COLOR PURPLE  
tipping-in replacement pages, map or chart pockets, hand slitting for double-fan, tape repair of tears
- FLAG COLOR GREEN  
tighten in case
- FLAG COLOR YELLOW  
pamphlet binding
- FLAG COLOR ORANGE  
reback - repair of book in boards
- FLAG COLOR RED  
full repair - repair of book with cover off book

##### Other Book Treatments [no flag color]

- book alkalizing prep
- double fan adhesive binding - "quick bind"
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## Enclosures

- shrink wrap
- CoLibri polyethylene book jackets

## CONSERVATION LAB METHODS

### Book Treatment

- hinge repair
- standard repair (CMR)

### Document Treatment

- map mounting

## Enclosures

- photo portfolio
- pamphlet portfolio
- corrugated clam shell box
- cloth covered book box

### Exhibit installation

- mat board book cradle
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## IN-HOUSE REFORMATTING

- preservation photocopying guidelines
- preservation imaging

University of Iowa Libraries Preservation Department

Collections Conservation PROCEDURES MANUAL

August, 2004

University of Iowa Libraries Preservation Department

CIRCULATING COLLECTIONS METHODS [PURPLE]

## TEAR MENDING WITH TAPE

### Application

General

### Materials:

Document repair tape

Bone folder

Scissors or knife

### Procedure:

1. Align tear using paper fibers and text as visual guides.
2. Carefully affix tape over tear, extending the strip over the edge of the page.  
Rub gently with the flat side of a bone folder.
3. Repeat step #2 on the reverse side of the paper.
4. Trim excess tape flush with the page.

## REPLACEMENT PAGE TIP-INS

### Application:

To be used in the following situations:

- a. Reattaching pages that have fallen out of a binding
- b. Inserting photocopied replacement pages
- c. Inserting erratum

### Materials:

PVA

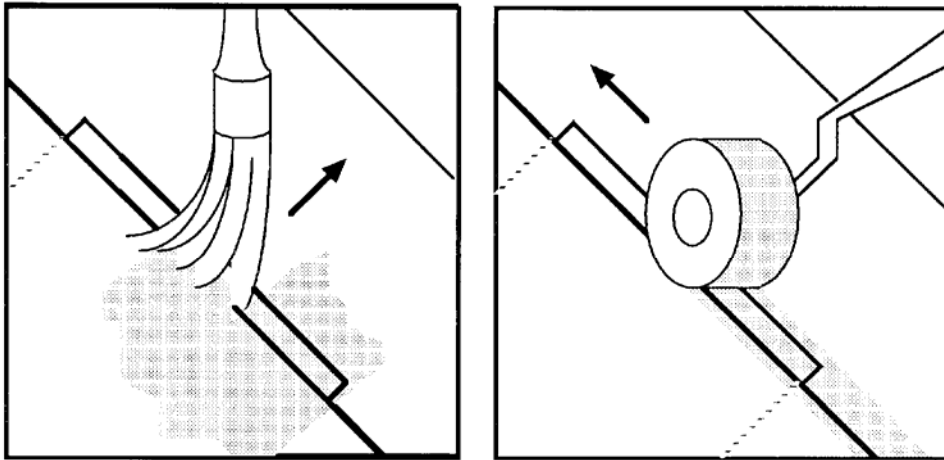
Brush or roller

Paper trimmer or knife

### Procedure:

1. If reattaching or inserting a missing page, clean the gutter of as much of the old page(s) as possible.
2. Trim:
  - a. If reattaching a detached page, trim the page to clean up the torn edge.
  - b. If inserting a replacement page, trim the new sheet to the size of the textblock. *New pages must not protrude beyond the textblock.*

3. Lay the page to be inserted, face down, on a piece of paper or polyester sheet. Place a second long grain strip of paper or strap of polyester over the top of the page leaving only a thin margin (approximately 3 mm) of the inner gutter edge showing (the edge to be adhered). Apply adhesive over this edge, using brush strokes that run perpendicular to the edge of the page. If using the roller, run along the exposed edge.



Brush and roller tipping with waste sheet

4. Support the opened book at the location for the page insertion. Elevating the adhesive tipped gutter, register the loose leaf edges to the head, foredge and tail of the textblock. Then lay down and smooth out the gutter edge, sealing it in place with a folder.
5. Insert a piece of wax paper over the tipped-in page, shut the book, and dry under minimal weight.

#### Exceptions:

- If 2-3 pages are to be tipped into the same section of a book, use the above procedure to tip the individual pages together, then tip the entire group into location.
- Tip in single folios using the same procedure as for single sheets, but be aware that any loose folios may imply damaged sewing.
- Loose folios should be sewn together through their folds and through the cambric lining of the text back.

#### Quality Check

No protrusion of adhered page(s) beyond textblock







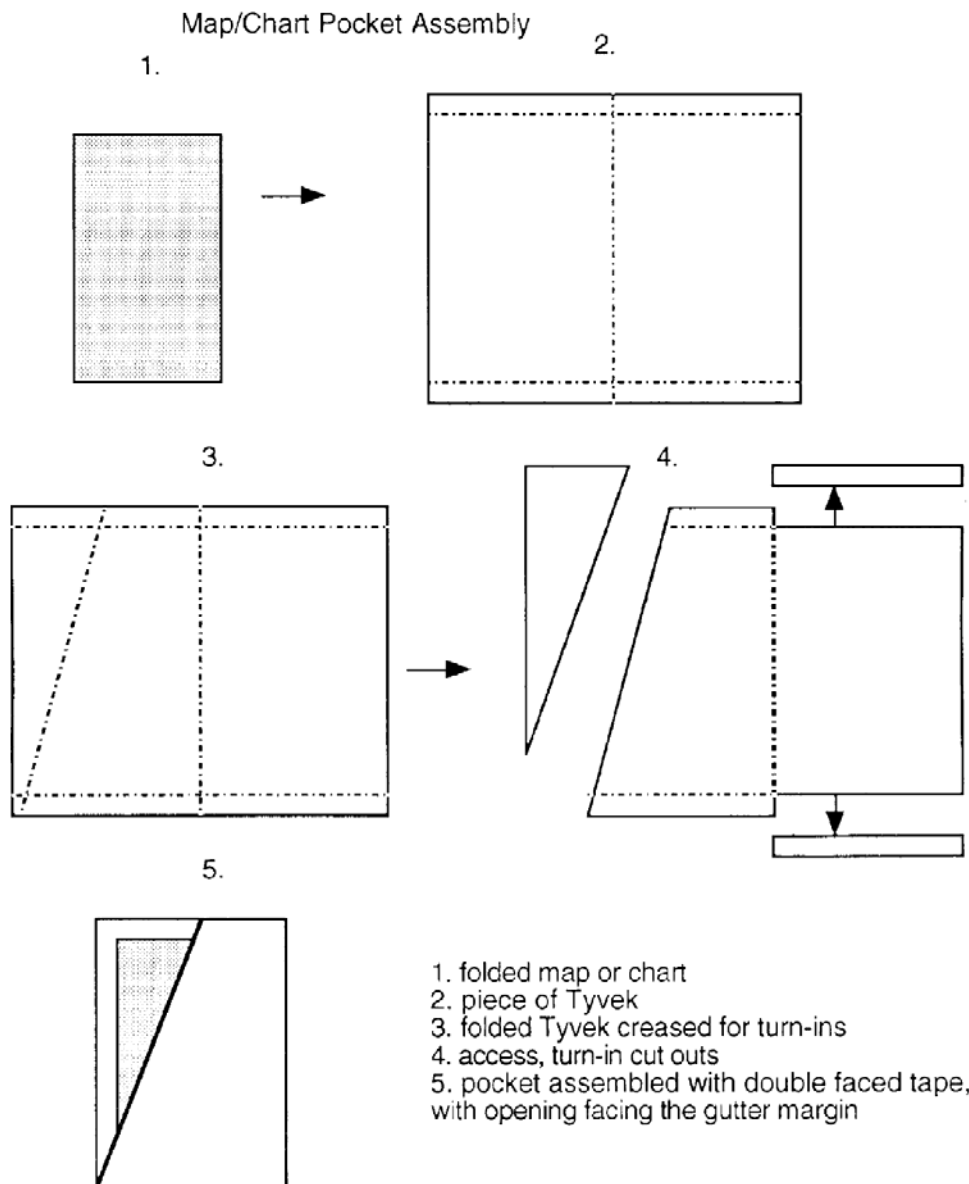
## MAP / CHART POCKET

### Application

Pockets should be placed in the backs of books to contain loose items such as maps and charts.

### Materials

Tyvek, double faced transfer tape, straight edge, bone folder



## Procedure

- Compare the map or chart to the available pastedown area. The item must be kept somewhat away from the hinge area (if possible) and not extend over the pastedown edges at head, foreedge and tail. If needed, refold the map or chart.
- Cut a piece of Tyvek double the width of the item; the other dimension is the height of the item plus 3 cm. Fold the piece in half, widthwise.
- Position the item on the folded Tyvek with an equal amount of excess at head and tail. Mark the size of the item on the Tyvek.
- Using a straight edge, crease the turn-ins of the Tyvek pocket at head and tail.
- Open the creased and folded Tyvek. Cut away the excess from both ends of the back section. Then cut the front pocket opening at an angle from the head to the tail.
- Fold up the pocket into its final form and apply tape strips to the turn-ins.
- Apply tape strips along the back edges of the pocket; position on the back book cover and press to adhere.

Exception – multiple enclosures or especially thick items may require a multiple, gusset fold of the turn-ins.

## Quality Check

Snug fit to keep item captive, neatness of work

07.04/glf

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CIRCULATING COLLECTIONS METHODS [PURPLE]

## HAND SLITTING FOR DOUBLE FAN

### Application:

Failed adhesive bindings that have gutter margins too narrow for commercial rebinding. Also occasional items with loose leaves that need resewing or sewing repair, but with paper that is too brittle for mending and resewing

### Materials:

### Procedure:

1. inspect any item with loose leaves for completeness and right collation.
2. optionally, provide guillotine slicking or other partial separation of well adhered portions of the text.
3. hand separate each leaf
4. optionally, provide trimming or other gutter edge preparation prior to double-fan adhesive binding

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CIRCULATING COLLECTIONS METHODS [GREEN]

## TIGHTENING IN CASE

### Application:

This repair should be performed when the hinge(s) of a book are loose but not separated. Do not use if cover cloth is torn at joint.

### Materials:

Knitting needles  
PVA in a detergent bottle  
Waxed paper  
Press and pressing boards

### Procedure:

1. Gently open hinge area by pressing down in the gutter of the opened board.
2. Insert knitting needle into PVA bottle to coat with an even amount of adhesive.
3. Insert adhesive coated needle into hinge(s) from tail. Slowly pull the needle out rotating it to dispense the adhesive.
4. Repeat step #3 from the head of the book.
5. Place wax paper between cover and endsheet at the hinge and close the book. Run bone folder over joint.
6. Carefully position book in press between edged boards.

### Quality Check

Cover joint adhered along its full length, joint positioned and set equally on both boards, no excess adhesive restricting opening.

University of Iowa Libraries Preservation Department  
CIRCULATING REPAIR METHODS [YELLOW]

PAMPHLET BINDING

Application:

This treatment should be used with single section sewn or stapled pamphlets and adhesive bound items of relatively few leaves

Materials:

LBS pamphlet binder for both sewn and adhesive flanged attachment

Or gray/white barrier board and book repair cloth

Staple remover

5 awls

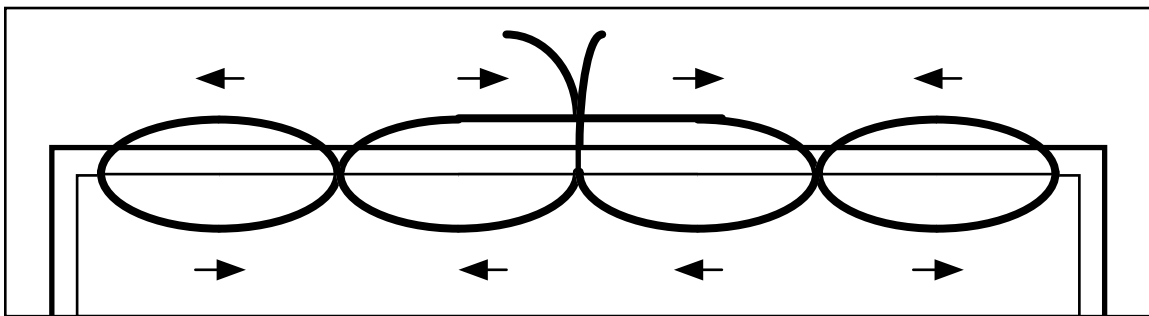
#18 linen thread

Sewing needle

Method for sewn items

1. Choose the smallest size LBS binder that will accommodate the pamphlet.
2. Remove all staples from the pamphlet.
3. Position the pamphlet into the binder and pierce 5 sewing holes. Use 5 awls and leave them in the holes to keep the pamphlet in place.
4. Cut a piece of thread 2-1/2 times the height if the pamphlet. Thread a needle.

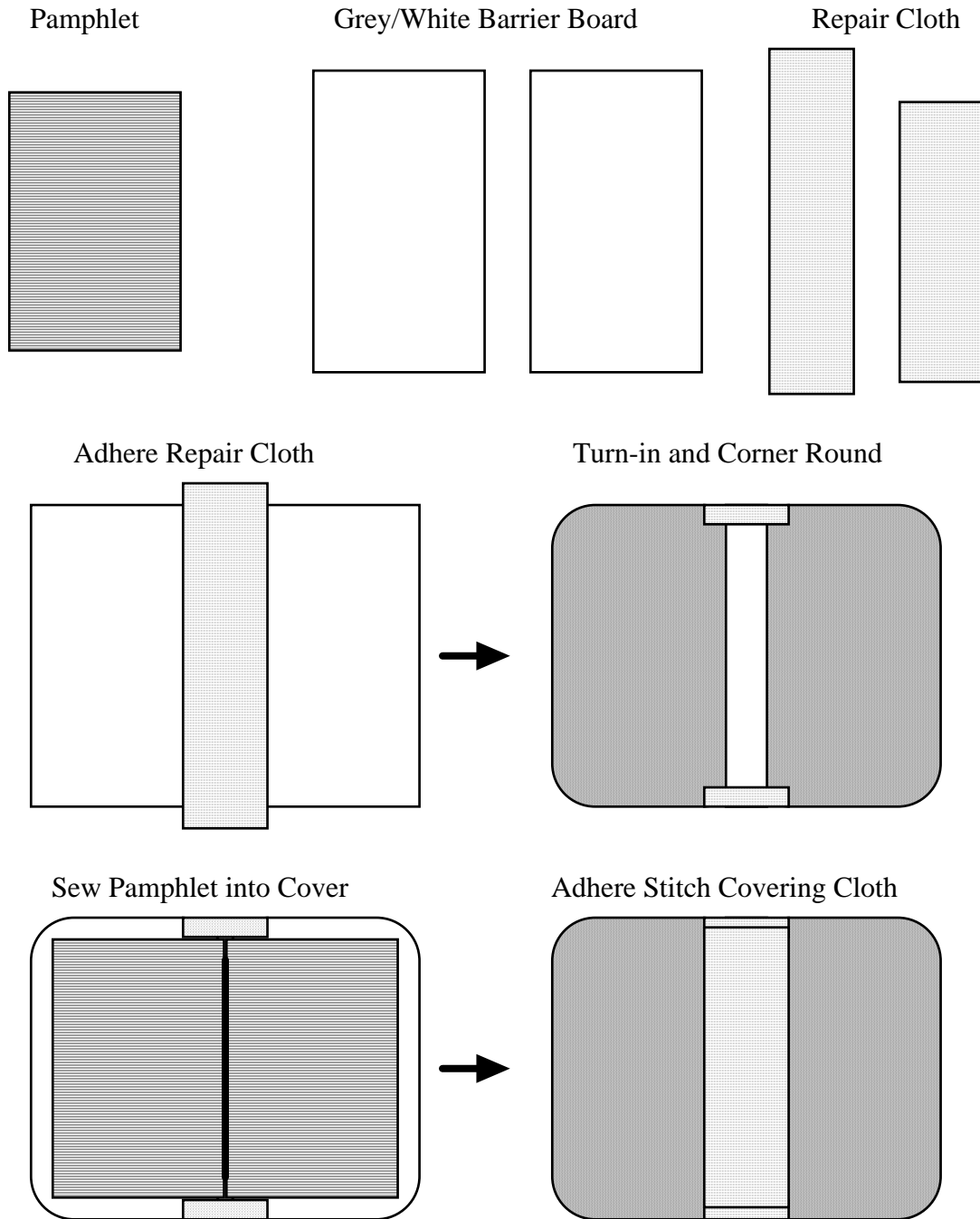
Pamphlet Stitch



5. Beginning on the outside at the center, sew the pamphlet into the binder using a figure 8 pattern. Be sure to pull the thread tight. Tie thread with a square knot on the outside of the spine.
6. Remove protective strip from adhesive panel on spine cloth and wrap spine cloth around the spine.
7. Remove protective plastic from the adhesive panel on the spine cloth of the LBS binder and wrap spine cloth around. Seal securely with bone folder.

*Note: only items cataloged as folio can be placed in binders above 28 cm in height.*

### Custom Made Pamphlet Cover





*For oversize pamphlets, construct binder in the following manner;*

1. Cut 2 cover pieces from gray/ white barrier board to the following dimensions; width = the width of the pamphlet, height = the height of the pamphlet plus 1.5 cm.
2. Cut 2 strips of repair cloth to the following dimensions; width = 6 cm, height = one strip should be the height of the gray/ white barrier board cover plus 3 cm and the second strip should be the height of the cover *minus* 1 cm.
3. Lay out the gray/ white barrier board covers exactly parallel to each other with the white sides up. The distance between the two covers is a spine width of 3 cm. (use a spacing gauge) Place a weight on each cover to hold them in alignment.
4. Apply adhesive to the longer repair cloth strip, along the outer 1.5 cm margins, leaving the middle 3 cm free of adhesive. (alternately, apply adhesive overall) Adhere the long strip to the white side of the covers, centering from side to side and from top to bottom.
5. Turn the constructed cover over with gray boards up and seal down turn-ins at head and tail.
6. Close the constructed cover and set the center fold in the cloth spine. Round cover corners in the corner rounder.
7. Now follow instructions 2-5 from the LBS narrative, above.
8. Finally, apply adhesive to the shorter strip and position it on the closed cover aligning with the previous turn-ins. The extended flange is then wrapped around to the opposite cover and the covering cloth is sealed down using the bone folder.

#### Method for adhesive bound items

1. check leaf attachment (if necessary, hand slit and rebind adhesively)
2. choose flange binder
3. trim flange to item height
4. adhere item to flanges (moisten adhesive film and seal to covers with porous papers, with slick paper covers, key flanges with PVA adhesive)
5. seal flanges and weight pamphlet binding

#### Quality Check

Tightly sewn stitches, neat appearance

7/04/GLF

## REBACK - IN-BOARDS REPAIR

### Application:

This repair should be used when the cloth spine of a book has been torn at the joint(s) but the board attachment is sound and the hinges are intact.

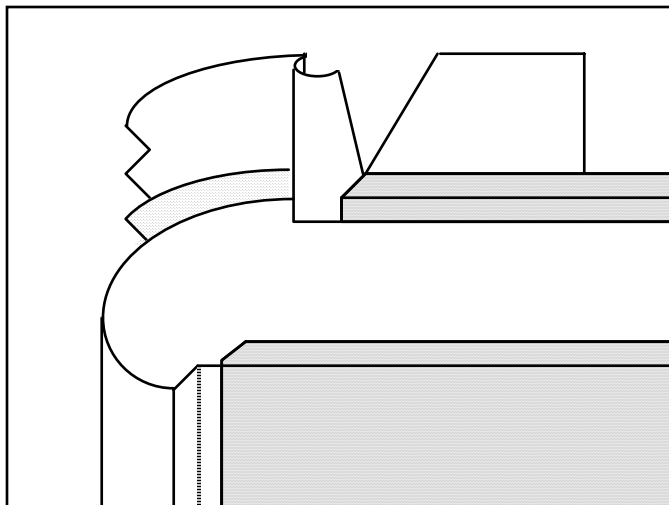
### Materials:

Rolled book cloth, 10 pt. spine inlay, PVA adhesive, straight edge, brush or roller, scissors, damp sponge, press and edged boards

### Procedure:

1. Using a knife, remove the loose spine of the cover. Be careful not to cut through the hinges of the end papers. Trim loose threads with scissors.
2. If original back lining is loose it can be removed; if loose at the edges, but otherwise secure, the edges can be resealed
3. Lift original inlay from the detached spine piece, trim off the frayed edges.
4. Cut a strip of bookcloth to the following dimensions::
  - width = the width from joint to joint plus approximately 6 cm.
  - height = the height of the book boards plus approximately 3 cm.
5. Choose a spine inlay the width of the back of the text (from shoulder to shoulder) and cut it to the height of the book boards.
6. Adhere the inlay in the center of the cloth piece. Rub it down with a bone folder.
7. Adhere security strip to the inlay.
8. Cut darts in the turn-ins aiming to intersect the leading edge of the board after the confirmation of the cloth into the joint groove. See diagram.

Detail of turn-in dart  
cut into the repair cloth



(reback continued)

9. Apply adhesive to the tabs of the turn ins over the inlay and turn these down over the inlay. Rub gently with a bone folder.
10. Apply adhesive to the remaining exposed flanges of the assembled spine wrapper, taking care not to get adhesive on the inlay.
11. Install the assembled spine wrapper to the book
  - hold the book in your hand and center the spine wrapper over the back of the book. Glove the spine wrapper around the book and seal down the flanges on either side.
  - trip the remaining turn-in tabs over onto the inside of the boards.
12. Close the book and set the joints with a folder.
13. Adhere original spine piece to the new spine, carefully sealing down the edges.
14. Set the book between edged boards and press

#### Quality Check

Precision of spine cloth positioning and its tightness around the text back, neatness of trimming and adhesion of original spine cloth.

07.04/glf

## FULL REPAIR with cover removed

### Application:

A full repair is suited to books with damage to the text block, cover and cover-to-text attachment. The original covers are retained including interior and exterior markings. The spine of the original cover is normally remounted to the repaired cover.

### Materials:

cloth cambric  
inlay CRI .10 pt. folder  
repair cloth  
light weight lining paper  
awl, thread, needle

### Method:

This repair includes four operations: (1) linings and inlays, (2) assuring secure leaf attachment of the text, (3) reinforcing the cover and (4) reattaching the cover to the text.

1. Back linings (light weight) and inlays (CRI 10 pt folder) are produced in 2 mm interval widths and 35 cm length.
2. Cambric is produced in 35 cm length and 1 cm intervals beginning with 4 cm.
3. Textblock is released from cover.
4. Back lining is released and cleaned from text back. (If this lining is well adhered or can be re adhered, the repair can proceed without removal provided that the shoulder edges are trimmed and well adhered.)
5. A cambric piece is selected (width of text back plus 5 - 6 cm) and cut to text height.
6. Using roller applicator or brush, apply adhesive to text back
7. Center and conform cambric to text back, across shoulders and into the seat of the shoulders, seating text into wooden lying press.
8. Determine if cover is to be reinforced intact, or reconstructed from separated boards and spine.

9. If reinforced from intact cover; take out old inlay, insert new inlay and apply security strip.
10. Secure any loose gutter margin of the pastedown.
11. If reconstructing the original cover from separated boards and spine; trim out boards to provide a clean edge as well to assure the correct fore-edge square and seal gutter edge of pastedowns (if needed).
12. Select color of repair cloth, trim to cover height + two turn-ins and width (back width + 5-6 cm). Nick cloth center, head & tail.
13. Apply adhesive to cloth using roller applicator.
14. Assemble case; apply inlay, set down boards with original joint width, check tail edge alignment with straight edge. Turn-in over head and tail, folder-set joint at edge of boards working on the exterior surface. Set cover closed to dry.
  
15. Provide sewing reinforcement of sewn texts. Locate the center of outermost gatherings.
16. Pierce sewing stations through fold and cambric lining.
17. Sew through the cambric lining using a pamphlet stitch pattern.
18. Adhere paper spine lining over cambric.
19. Open out pastedown flanges and apply adhesive (using small brush or narrow roller (do not apply adhesive to the side of the shoulder, do not apply adhesive to the cut edge of the flange)).
20. Strike the gutter edges of the cover boards with adhesive.
21. Carefully glove cover onto textblock (watch both head and tail square and tight wrap of cover inlay over text back).
22. Folder-set joint.
23. Insert waxed paper strips in board openings.
24. Press book between appropriate edged boards.

#### Quality check

- Precision of cover repair and spine mounting
- Tight gloving of cover to text with accurate joint set from edged board pressing

University of Iowa Preservation Department  
CIRCULATING COLLECTIONS METHODS

## PROCESSING BOOKS FOR MASS ALKALIZATION

The Preservation Department is currently participating in a CIC cooperative program to alkalize bound books. Preparation for shipment of books to the Preservation Technologies plant includes the following steps:

### Sending

- Receive the LCFC books from the marking department.
- Select English language only, no serial sets (serials OK). Government Document items need to be confirmed by Brett Cloyd.
- Spot test each book for alkaline paper using the Abbey pH pen with a trial swatch on the tail edge of the book. Suspect positives should be checked in a corner of a last printed leaf.
- Record separate counts for alkaline paper books and acid paper books.
- Mark alkaline paper books in pencil in the gutter margin of the lower board opening. Mark an infinity sign plus the date of the spot test.
- Return alkaline paper books to normal processing flow (to circulation).
- Shelve acid paper books in book repair area until 375-400 books are gathered. Charge out from the library and generate a packing list. Confirm shipment count.
- Choose a duplicate (discard) book to use as a control volume. Cut the book in half using the guillotine. Retain one half, clearly marked with shipment number. Pack the other half for shipment.
- Pack acid paper books in the plastic totes following PT guidelines.
- Prepare pallet and advise shipping department of the need for a pickup.

### Receiving

- Unpack books from plastic totes. Store totes for future shipments.
- Verify shipment count.
- Check in books for shelveable condition and the presence of the PT treatment label.
- Send books to acquisitions department for online alkalization note.
- Give treated control volume to Conservation for testing of alkaline reserve

3/04/sh

University of Iowa Libraries Preservation Department

CIRCULATING COLLECTIONS METHODS

QUICK BIND

Application

This method is intended for on-demand, in-house binding of preservation photocopies and to replace failed publishers' glued bindings.

Materials

100 lb. text endpaper, UltraFlex fan adhesive, .050 acrylic coated archival grey board, bookcloth and 10 pt. card for spine production

Procedure:

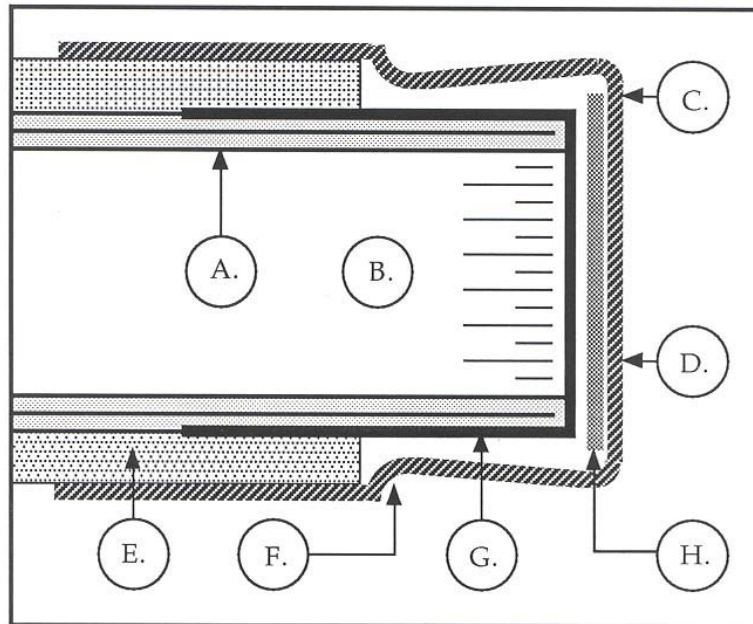
1. Remove textblock from covers. Carefully separate each page from the others, retaining proper collation. Alternatively, if adequate gutter margin allows, trim off original glued binding in guillotine.
2. Cut a set of endpapers to size of page. Cut a strip of cambric to height of page. Width of cambric must allow two 2.5 cm flanges beyond spine width.
3. Place loose pages in Jermann double fanner, centered between clamps. Tighten clamps firmly and rotate spine up. Fan textblock forward and slightly rough up binding edge using a sanding stick or side of teeth of industrial saw blade. Fan in opposite direction and repeat.
4. Rotate work to flat position and release clamps. Add endpapers and re-register to form neat textblock. Clamp firmly and rotate spine up.
5. Fan textblock forward and apply PVA with roller to binding edge. Be careful to avoid PVA over head or tail. Quickly fan textblock in opposite direction and apply PVA.
6. Immediately register binding edges upright and tightly together. Apply cambric strip to glued spine, wrapping around textblock shoulders to adhere cambric onto spine with no gaps or wrinkles.
7. Rotate to flat position and remove textblock from fanner. Place between flat boards and under weight. Ideally, let rest several hours to allow glue to dry.
8. Cut gray board to dimensions of page or slightly larger. Apply PVA between flange and endpaper at front and back of textblock. Using roller,

glue out white (inner) side of one board and place on outside of textblock, creating setback from spine of approximately 6 to 8 mm. Repeat with other board. Press between flat boards and under weight while assembling spine cloth piece.

9. Choose inlay the width of textblock spine and cut to height of boards. Cut strip of book cloth this same height; choose cloth for width to extend onto boards 1/5 - 1/6 book width. Adhere inlay to center of book cloth strip. Adhere security strip to the inlay.
10. Apply glue to flanges of book cloth and wrap around spine of volume. Using a bone folder, conform book cloth to all surfaces it covers. Use a strip of gray board under and above the spine in the setback region to ensure strong adhesion in these areas; press under weight between flat boards.
11. After several hours' drying time, minimally trim head, tail, and fore edge with guillotine for flush finished edges.
12. Original paper covers may be trimmed and mounted onto boards.

#### Key to Quick Bind

- A. folio endpaper, 100 lb. text weight
- B. double fanned text
- C. spine wrapper attached after book trimming
- D. book cloth
- E. .050 acrylic coated grey archival board
- F. joint set with edged press boards
- G. 6 to 8 mm setback of boards
- H. paper inlay, 65 lb. cover weight



#### Quality check

- effective double fan and text alignment
- equal board set-back
- clean book trimming
- precise spine wrapper fitting



It is possible to set a textblock back into an original case; great care must be taken to keep the textblock absolutely square. If textblock width was reduced by guillotine trimming, the case may need to be reassembled to lessen the setback.

Note that if the textblock is to be set back into original *soft* covers, the addition of cambric will create a spine slightly wider than the original. A new crease of the paper cover will be necessary at the back shoulder; therefore the back cover will then be too short to meet the fore edge. This can be remedied by adhering cover liners of 10 or 20 pt. card.

University of Iowa Libraries Preservation Department  
CIRCULATING COLLECTIONS METHODS

## SHRINK WRAPPING

### Application:

This procedure should be performed in order to stabilize and protect books that are in fragile condition or when further preservation measures are not feasible.

### Materials

Awl

Shrink-wrap film [Bemis Clysar EHC 150 gauge 2 ply 24" roll]

Sealer [26" UB26]

Heat Tunnel [14" Packing Systems 110]

### Equipment

The shrink-wrapping equipment is located in the hallway of the Library basement to insure adequate ventilation for the process.

The **heat tunnel** (26" UB26) will work best at approximately these settings:

Chamber temperature – 300

Belt temperature – 50%

Conveyor Speed – 50%

The heat tunnel needs approximately 10-15 minutes to warm up. When the specified settings are reached the red light for each will turn off. Books can then be placed on the conveyor belt of the tunnel.

As the tunnel is used, the introduction of cooler air and books will cause the temperature within the tunnel to drop. When the red lights turn back on, no books should be put through the tunnel until the lights go off again.

When the heat tunnel is turned off, it turns on the blue light beneath the on/off switch. The heat tunnel will continue to run as it cools down. **THE HEAT TUNNEL CAN BE DAMAGED IF THE CORD IS PULLED DURING OPERATION OR DURING THE COOL-DOWN PHASE.**

The **sealer** (14" Packing Systems 110) does not need to be warmed up. Electric current rapidly heats the wire on the arm of the sealer whenever the arm is brought down.

There are owner's manuals for both the heat tunnel and the sealer, located in the LA's file drawer under Shrink-Wrap.

## Procedure

1. Pull double-ply shrink-wrap film across the sealer, extending it to size for the book being wrapped.
2. Place book inside shrink-wrap film, using opening at the bottom edge. Make sure that the book is square with the edges of the shrink-wrap film, its text block is aligned with the case and loose materials are as close their original position as possible.
3. Adjust size of plastic, making sure to leave at one-half (1/2) inch of space (depending on the thickness of the book) between the edge of the book and the sealer.
4. Bring top arm of sealer down on top of shrink-wrap film and hold in place until film containing the book separates from the film still on the roll.
5. Release and return top arm of sealer to its ready position.
6. Turn the book and seal the remaining open side, leaving the same amount of space between the edge of the book and the sealer. Discard scraps.
7. Using an awl, poke one ventilation hole in each of the four corners of the sealed plastic and two above the center of both the front and back of the book.
8. Place on the center of the belt in the heat tunnel.
9. The belt will allow the book to pass through the tunnel and heat the book evenly allowing for a smooth, yet sturdy seal around the book. As needed, final alignment of the book can be made for upright shelving immediately after it exits the heat tunnel, while the shrink-wrap film is still warm and malleable.

## Quality Check

Once the book is sealed, make sure that shrink-wrap is free from holes along the sealed edges, loose pages and materials, and bubbles or imperfections. Book should be properly aligned, both text block and boards, to assure upright shelving. A properly wrapped book should have a neat appearance.

University of Iowa Preservation Department  
CIRCULATING COLLECTIONS METHODS

## CoLibri polyethylene book jackets

### Application

These are used for protection of soft covers and printed book jackets over hard covers.

### Materials

CoLibri Desktop Covering Station  
CoLibri Polyethylene Cover Pouches

### Procedure

For soft cover books

- Choose a cover pouch to accommodate the height and width of the book. Place the cover pouch on the work surface.
- Insert one cover of the book into one of the pockets of the cover.
- Place the excess of the polyethylene into the slot of the CoLibri Station and press the lever. The cover is welded and trimmed to the correct height for the book.
- Insert the other cover of the book into the other pocket. Curve the book cover to slide it into the pocket.
- Close the book and position the cover, leaving excess at the book back cover foredge.
- Place the foredge excess into the slot of the CoLibri Station and press the lever to weld and cut.
- Check the cover for a snug fit.

For hard cover books with printed book jackets

- Choose two cover pouches according to the size of the book. Place one cover pouch on the work surface.
- Insert one cover of the book into one of the pockets of the cover.
- Place the excess of the polyethylene into the slot of the CoLibri Station; press the lever to weld while holding the book in place. Repeat the operation for the foredge.
- Place the second cover pouch on the work surface and insert the other book cover.
- Insert the excess of the polyethylene into the slot; press the lever. Repeat for the foredge.
- Weld and trim the spine by inserting both covers into the slot. With the switch in OVERPOWER position, press the lever.
- Check the cover for a snug fit.