Frame Adjusting II

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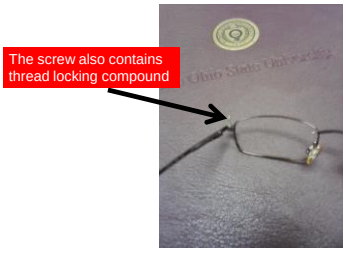
Part II Topics

- Adjustments specific to the patient
  - Day-to-day frame repairs
  - Most common plastic frame adjustments
  - Most common metal frame adjustments
  - Rimless groove mounted adjusting
  - Rimless drill mounted adjusting
- Developing a proficiency through practice

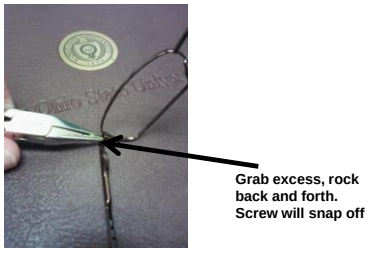
Adjusting often includes minor repairs and modifications

- Replacing screws
  - Regular spectacle frame 1.3/1.4 mm
  - Quality sunglasses 1.6 mm
  - Over the counter 1.8 mm
  - Spring hinge screws
    - Self aligning screws are **very** helpful
    - Spring hinge tools
- Hilco Fast Find Screw Kit
- Option of “tap and snap” or cutting excess screw?

Tap-n-snap screws



Grab excess screw with needle nose pliers



Second most common repair

- Nose pad replacement
  - Different types and sizes
  - Silicone vs. Acetate
- Correct attachment
  - Removal tools if not screw attachment
- Screw size (if needed)
  - 1.0 mm most common
- Fee

Removing a snap in nose pad

Loose screws

- Loctite ™ vs. clear nail polish
- Superglue ☹
- Misaligned hinge barrels
- Self locking replacement screws
  - Note: many self locking screws also come with the "***tap and snap***" option
- Flatten or peen screw tips

Damaged or stuck screws

- Most challenging repair
- Screw extractor
- Use of drill or punch
  - Usually requires hinge to be re-tapped
  - May require screw with hex nut
  - Bulls-Eye™ Screw Drilling Guide
- Hot Fingers ™, penetrating oil, ultrasonic etc.
- Staking Tool

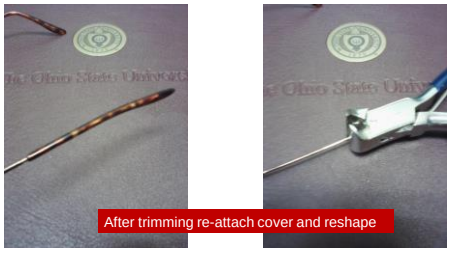
Replacement temple covers

- Metal frames
  - Heat, straighten and remove old cover
  - Re-install new cover, heat as you go
  - Re-adjust on patient
  - Smaller than normal covers
    - Typically more difficult to work with and install

Trimming or changing temples

- Trimming or adding length
  - Many styles are designed to be trimmed
  - Remove cover, trim and file smooth
  - Re-installing cover
- Cable temple conversion
  - Determine location of cut
  - Attaching and adjustments

Changing temple tips or shortening the length



After trimming re-attach cover and reshape

Changing “pad height”

- **Steps**
  - Straighten pad “arm”
  - Create new bend further closer to the base where arm attaches to frame front
  - Create new curve in pad “arm”

Steps In Fitting

STEP 1: Temple Angle
a. Check for proper temple parallelism
b. Check for equality of lens distances from the eyes, viewing from the top

STEP 2: Pantoscopic Angle
a. Check for straightness of the frame on the face from a front view
b. Check tilt of lenses from a side view

STEP 3: Nose pads or Bridge Area
a. Adjust the nose pads for proper angle
b. Adjust the frame for proper vertex distance when necessary
c. Adjust the frame for proper height

STEP 4: Temples
a. Temples are adjusted to exert slight pressure over the tops of the ears
b. The temple bend is moved to its proper position
c. The bent down portion is contoured to match the side of the head and back of the ear

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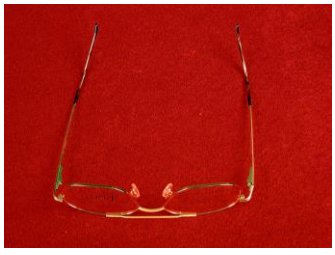

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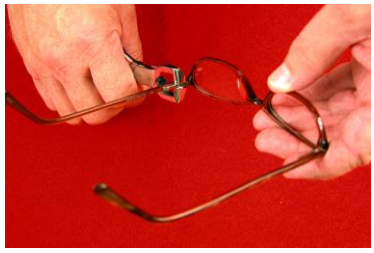


Steps In Fitting

STEP 5: Check fit
a. lift/tug test
b. bridge fit
c. head bounce test

STEP 6: Final Presentation
a. Temples will close
b. All screws tight
c. Clean lenses

STEP 7: Patient Use and Care Instructions
a. Demonstrate how to use
b. Explain adaptations
c. Explain care of lenses and frame

Most Common “plastic” frame adjustments

- Temples “flair” out- not parallel
- One lens closer to one cheek/eye than other
- Glasses slip down- if adequate pressure on temple area check behind the ear
  - Most likely the cause
  - Proper adjustments - http://go.osu.edu/Rohlf

Changing temple angle or bringing “sides” in

Heat can damage (craze) lenses, use minimal heat or remove lenses from frame entirely if significant frame adjustment is necessary

Most common metal frame adjustments

- Loose- check temple pressure
  - “bow” temples as needed for the wider head
  - Make sure temples are parallel
    - One temple spread out could still work but feel loose
- Nose pads
- Temple bends
  - Again- no 90 degree angles

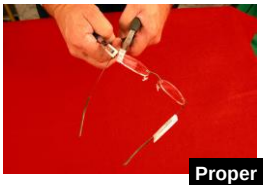
Face Form

- May also be referred to **frame wrap**
- Negative face form will make both plastic and metal frame loose
- Slight negative face form may help with lash crash
- Positive face form is preferred- usually helps with better vision but on rare occasions patient might prefer negative

Adding “panto” to rimless groove

Rimless groove repair

Adjusting Rimless Drill Mount



Proper tools are required

Totally Rimless

- Examples:
  - Marchon Airlock ™
  - Silhouette Minimal Art ™
- Common repair
  - Replacement of bushings, pressure mounting sleeves. Silhouette calls them BLS and manufacture various sizes depending on the model
  - Correct sleeve is crucial to achieve and maintain a tight fit
  - Practice adjusting a pair today.

Review-Most Common Adjustment

- Observation or concern
  - Glasses slip
    - Solutions
      - **#1 cause- improper temple bend**
      - Reduce temple endpiece angle, this increases pressure on side of head.
      - Curve temple slightly
      - Could be a nose pad adjustment as well

Review- 2nd Most Common Adjustment

- Observation or concern
  - Temples are too tight
    - Solutions
      - Check endpiece angle, increase angle
      - Overall poor bend – could be where bend begins
      - Pressure on mastoid bone
      - Patient preference

Review- 3rd Most Common Adjustment

- Observation or concern
  - Glasses are crooked
    - Solutions
      - Open temple alignment
        - If the complaint was closer to one side
      - Temple Parallelism
        - If complaint was higher or lower on one side
      - Least common: frame front "x-ing"

Review- 4th Most Common Adjustment

- Observation or concern
  - **Nose pads hurt** or leave marks which don't go away for long periods of time
    - Solutions
      - Check splay – back of pad spread open (very common)
      - Check frontal – tops closer together (this could also be the top of the pads are too close together)
      - Check vertical – bottom slightly closer to front (least common adjustment)

How adjustments affect vision

- Effects of panto or retro
- Vertex distance issues
- Compensated Rx's – modern lenses
  - Designed to make dispensing easier
- Other variables……

Frame Adjustments- An Overview

- Left lens is higher – adjust left temple up or right down
- Right lens is higher – adjust right temple up or left down
- Left lens is farther in – adjust left endpiece in
- Left lens is farther out – opposite, adjust out
- Right lens is farther in – adjust right endpiece in
- Right lens is farther out – opposite, adjust out
- Glasses are level but too close to cheeks – too much panto, decrease the panto
- Glasses are level but too close to brow – increase panto
- Too much panto could also be related to bend behind ears
- Lash crash – increase vertex distance if optional

Practice Exercise

- Frame Adjusting
  - Try out the different tools available
  - Practice any adjustment you find interesting using hot air frame warmer
  - Adding pantoscopic angle/tilt to plastic, metal, rimless groove and rimless drill mounted frames
  - Practice PROPER nose pad angles
  - Practice and understand face form
  - Understand how to increase/decrease vertex distance
  - Understand how to “raise or lower” bifocal heights without remaking
  - Get comfortable adjusting rimless drill mounts!

Thank you!

Feel free to e-mail me for a copy of anything covered today at
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