



New York State Society of Opticians, Inc.

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New York State Continuing Education Mail-In Course

The Right Tool for the Right Job

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NYSSO Course ID# 03-16

NYS CE Sponsor ID# 041998-042001.001

The more proficient a dispenser is with an assortment of tools the greater his or her confidence in all aspects of frame adjustments and repairs. The more competent the dispenser, the greater the customer satisfaction.

A bench alignment or bench adjustment is aligning the frame to a known starting reference point. This is a **MUST** before every frame delivery, or when a customer returns with a poor-fitting frame. Without putting the frame into a symmetrical position, a custom fit to the customer will be virtually impossible.

Let's Take a Look at the Components in a Bench Alignment

Bridge

Always begin at the bridge! The reason we start at the bridge is to reduce coming back to it after we may have adjusted a temple angle that seemed incorrect. Assuring that the bridge is not skewed will permit the dispenser to move right along to the endpieces, ending with the temple bends.

Propeller is a twist in the bridge, causing one bottom eyewire to be in closer than the other. Looking down over a frame front will allow you to note this abnormality. If it is twisted, simply heat the bridge area of a zyl frame with hot air blower or glass beads (that have been mounded). With the warmed plastic frame or any metal frame now place your fingers of each hand at the bridge, and twist the bridge back into symmetry.

Next look straight at the frame front. Are the lenses straight along the horizontal meridian with each other? Does one lens seem in closer to the customer's face? This misalignment too is easily remedied by (applying heat with zyl frames) simply using your fingers to push

This course is worth one (1) New York State Ophthalmic Dispensing credit, which can be applied to Ophthalmic Dispensing licensing requirements.

one eyewire in an opposite direction in order to align both sides evenly.

Lastly, if the frame has nose pads, take a look to be sure that they are equidistant from the eyewire (preferably 1 mm) and symmetrical to each other.

Endpiece

Once the frame front has been aligned, it is time to move on to the endpiece area. This is the area where the temples join the frame front. For a bench alignment, it is necessary to angle the temples uniformly to approximately 90 degrees from the frame front. This can be scrutinized by placing the eyewear on the table right side up and looking down over the top. One or two pliers can be used to achieve this adjustment, and will be discussed in greater detail later in this article.

Now, hold the frame front in one hand and observe how the temples are positioned. The temples should have a uniform 8 to 15 degree tilt off of the frame front. This is called pantoscopic tilt, and allows the lens to be accurately located in front of the customer's visual system. The proper tools and technique will be discussed later.

Temples should be straight (not bowed – unless they have been specifically designed to fit this way). Heat for plastic frames, and hands can take out any unnecessary curves from temples. Lastly, temple bends should be roughly 30 degrees, and symmetrical to each other.

Tools for the Task at Hand

Once the alignment has been done, the eyewear can be fitted to the customer's head. Let's take a detailed look at special pliers for specific adjustments.

Chain Plier

This plier has two flat jaws. Its use could be to grip a nose pad arm, or to angle endpieces/temples. A word of caution when using this plier. Because the jaws are both flat and made of tough metal – marks can be left on frame parts. It might be wise to consider using this plier with a cloth wrapped around the part being adjusted to protect the frame finish.

Bent Chain Plier

This wonderful little plier is like the previous plier, except that the jaws have been bent at a 30-degree angle. This makes it possible to get into tight spots such as nose pads and endpieces of smaller design.

Flat/Round Nose Plier

This is the ONLY plier that should be used when adjusting "American" or "S," nose pads. These guard arms that hold the pad to the frame front are shaped like an "S", and can be very tricky to adjust. This plier has one jaw that is round, and the other is flat. The purpose of this plier is to be able to insert the round jaw into the area of the nose pad guard arm that will be curved around. The flat jaw will act as the holding part. When adjusting this type of nose pad guard arm, the plier should only be placed where the guard arm is attached to the frame front or right where the nose pad is attached to the guard arm. Never place the plier elsewhere on the guard arm, as it may mar the metal. And more probably snap the entire unit off of the frame. Remember – practice makes perfect, and this is one area of frame adjustment that is not learned overnight.

Nylon Bracing Plier

This plier has one jaw that is very thin, and the other has a nylon "pad" on it. It's the ideal plier for angling endpiece/temple areas of frames. With the one metal jaw inserted on the inside of the endpiece or temple, the nylon jaw grips the frame without marring it. This plier can be used on a plastic frame that has been heated, or without heat on a metal frame.

Pad Adjusting Plier

This plier is to adjust "foreign" style nose pad guard arms. One jaw has a curved spoon shape that has been designed to fit over the nose pad, while the other jaw is slotted to enable gripping around the nose pad attachment unit.

Wide Angling Plier

This is one of my favorites. I don't know how an optical shop could operate without one! The jaws on this plier are WIDE, with a small hole in each to enable gripping over a protruding screw. Use to firmly grip the

barrels of the endpiece/temple screw area, angling versatility is a breeze. This plier should be used when angling pantoscopic/retroscopic tilt on endpiece areas. No matter what type of frame material (plastic or metal) this adjustment is performed cold (no heat applied).

Lens Truing Plier

Whether your dispensary fabricates eyewear or not – this plier is essential when lens axis alignment is necessary. These large pliers utilize either nylon or rubber pads that cup onto the front and back surface of a lens to enable rotation without marking the lens. A word of caution: use care with lenses that have high-tech coatings on them, as this procedure could mar the lens.

Cutting Pliers

It amazes me to see dispensaries that use cheapie cutters from the Dollar Store! While many dispensers I know trim their nails with these at work, it's important to keep in mind that a good quality cutter will outlast other less-expensive models, and do a better job. Many screws nowadays are of very tough metals, and inexpensive cutters will dent and dull. Tidbit for the day: if a screw is too tough to cut with your cutting pliers, let the plier make a dent on the screw, then use a Chain plier to finish the break. There are all types of cutting pliers; chappel end, oblique end and side cutters. All are designed to assist in getting into different cutting scenarios, whether cutting temple screws or rimless screw mounts.

Miscellaneous Tools

Are you one of those: a screwdriver is a screwdriver? Well, honestly – you get what you pay for, and I am in love with my solid brass body screwdriver. You are a professional, why not look like one? These babies are hefty and just plain feel good in your hand. Plus – they look great too! Sure, there are plastic top reversible screwdrivers, but I like the weight that heavy-duty optical screwdrivers give. How about a spring clamp screwdriver? These wonders will actually hold a screw in place while you place it into the barrel for screwing. Lastly, do you have a scratchless screwdriver on hand? This model has a nylon shield around the recessed blade, so that you can't scratch a lens while inserting a screw into a rimless mount. While some of these may sound frivolous – many of us have scratched very expensive lenses or frames, wishing we had the special tool to do the trick!

Equally as important as the screwdriver itself are the replacement blades. Chipped, nicked blades are worthless, and should be thrown away. Would you want your dentist coming at you with a dull drill-bit? Your stock of blades should contain .040mm, .062mm and .087mm blades for all the different size screw heads you encoun-

ter. Additionally, different size Phillips head screwdrivers are a must for your dispensing table. Be careful of the “trick” screw heads that appear to need a Phillips head blade. This screw head doesn’t have the recessed point in the center, and can actually break off the point of the Phillips head. Use a regular screwdriver blade with this type of screw.

Additional items that are made to snap into your screwdriver are screw extractors. These barbed-head items are placed on a part of screw remaining in the screw barrel, and with pressure applied many times successfully remove a broken screw without the need to drill. If there is a bit of the broken screw still protruding, then try a screw-slotting file. This thin little file can be used to recreate a screwhead on the top or bottom of a broken-off screw, as long as there is a little bit of screw to file into. Either of these techniques should be attempted first, as successful screw removal with these tools allow the inside of the barrel to still have the all-important threads.

Don’t have a drill? The new Knock-out Punch Pliers are really amazing! A lot of technology went into developing this tool that will pop out a broken screw without much sweat or ruining the integrity of the hinge area. Of course, when this tool is used, or a drill – the threads inside the hinge are ruined. New threads can be created with taps. Using a tapholder, much like a screwdriver, new threads can be made inside the screw barrel. Prefer the easy way out? Self-tapping screws have made the lives of dispensers much easier when screws need to be replaced.

Lastly are wrench tips which look like screwdrivers, but are actually designed to hold a hexnut while placing it onto the end of a screw. Some of the fancier models have ejectors built in, making it easy to pop the hexnut out from the tip.

Encountering broken screws that are a real night-

mare? Sometimes we do need to drill out the broken screw.

Files galore!

Optical files can be quite costly, but will last as long as you dispense if treated properly! The Zyl File has 4 coarseness options, which come in handy in the event that an endpiece or temple end needs filing. The Riffler File has a rounded end, which is designed so that the object beneath what is being filed won’t be scratched. The Half Round File has one flat side and one rounded side. The end is tapered, which allows for tight areas. The Pillar file is a petite file that is rectangular about its circumference. This file is for filing metal. One last word of wisdom is to file in one direction only. While it may be tempting to saw back and forth, it only clogs up those precious little sharp teeth that do the job.

Nosepad replacement

An assortment of nosepads is a must for any dispensary. However, no matter how grand your collection, the broken or dilapidated screw first needs to be removed. There is a wonderful little device that will pop out the old snap-in type of screw without the risk of breaking the screw’s guard arm. All these gadgets really do make our life easier.

Conclusion

Dispensers can be known as being creative. We get ourselves out of many dilemmas with a little elbow grease and ingenuity. Imagine how wonderful your day would be if only you had all of the right tools for the task at hand? Visit trade shows, tour through tool catalogs, and pick up a new piece from time to time. How about the newer ergonomic tools? Science and technology have gone out of their way to create these comfortable little tools that work like a breeze! Comfy handles; designed to place pressure right where it’s needed may prevent injuries suffered from repetitious tasks that are normal in our day-to day routine. Treat yourself – you’re worth it!

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The Right Tool for the Right Job

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Name: _____ License #: _____

Mailing Address _____

NYSSO Member: Yes No ***If no, the registration fee is \$30.00; please complete the section below or the membership application on the reverse side:***Method of Payment: Check (payable to NYSSO) Credit Card (please complete section below):Type of Credit Card: Visa Mastercard Dollar Amount _____

Expiration Date: _____ Card #: _____ Signature: _____

- | | | |
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| <p>1. The only plier that should be used when adjusting "S" type guard arm nose pads is:</p> <ol style="list-style-type: none">Wide Angling PlierChain PlierPad Adjusting PlierFlat/Round Plier <p>2. Use of a cloth around a frame part should be considered when using which plier:</p> <ol style="list-style-type: none">Wide Angling PlierChain PlierPad Adjusting PlierFlat/Round Plier <p>3. Given a super tough screw material that your cutting pliers can't cut, which plier may assist:</p> <ol style="list-style-type: none">Wide Angling PlierChain PlierPad Adjusting PlierFlat/Round Plier <p>4. When ordering your new collection of screwhead blades, which is NOT a size you would request:</p> <ol style="list-style-type: none">.020mm.040mm.062mm.087mm <p>5. Bench Alignment of a frame prior to the customer picking up their eye-glasses is done to:</p> <ol style="list-style-type: none">charge the customer extrafit their small headbegin from a known starting pointremember what their glasses look like | <p>6. Propeller in an optical frame means that:</p> <ol style="list-style-type: none">one lens may touch the customers left eyebrowone temple will twist out near the temple benda screw needs tighteningone nose pad is twisted out of shape <p>7. Bench aligning the frame always begins at the _____ and ends at the _____.</p> <ol style="list-style-type: none">nose pad, endpieceendpiece, temple endbridge, temple endstemple ends, bridge <p>8. The tool recommended for adjusting pantoscopic tilt is:</p> <ol style="list-style-type: none">Wide Angling PlierChain PlierPad Adjusting PlierFlat/Round Plier <p>9. Which plastic frame adjustment should be done cold?</p> <ol style="list-style-type: none">propellerpantoscopic tilttemple bendslens insertion <p>10. Screw extractors:</p> <ol style="list-style-type: none">drill out screwsruin the threads inside the barrelspunch out the screwuse pressure to gently force out the screw | <p>11. A frame with proper pantoscopic tilt would have _____ of tilt, achieved by using _____?</p> <ol style="list-style-type: none">10 degrees, Wide Angling Plier30 degrees, your hands45 degrees, Chain Plier90 degrees, Nylon Bracing Plier <p>12. Temples angled properly off of the frame front would be _____ achieved by using _____?</p> <ol style="list-style-type: none">10 degrees, Wide Angling30 degrees, your hands45 degrees, Chain Plier90 degrees, Nylon Bracing Plier <p>13. In a bench alignment, temples should be bent at _____, using _____?</p> <ol style="list-style-type: none">10 degrees, Wide Angling30 degrees, your hands45 degrees, Chain Plier90 degrees, Nylon Bracing Plier <p>14. The _____ file is _____, designed for use on metal frames.</p> <ol style="list-style-type: none">Riffler, roundPillar, petiteZyl File, 4 coarsenessesHalf Round, rectangular <p>15. The _____ file is _____, designed for use on plastic frames.</p> <ol style="list-style-type: none">Riffler, roundPillar, petiteZyl File, 4 coarsenessesHalf Round, rectangular |
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Membership Application

INDIVIDUAL'S NAME _____ COMPANY _____

HOME ADDRESS _____


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Type of Credit Card: Visa Mastercard Dollar Amount: _____

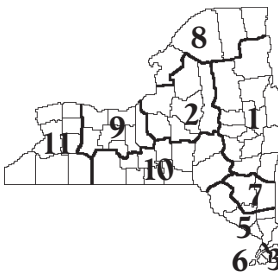
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<p>Please indicate to which organizations you belong:</p> <p><input type="checkbox"/> American Board of Opticianry Certified (ABO) <input type="checkbox"/> Fellow, National Academy of Opticianry (FNAO) <input type="checkbox"/> Opticians Association of America (OAA) <input type="checkbox"/> National Contact Lens Examiners (NCLE) <input type="checkbox"/> Contact Lens Society of America (CLSA)</p>	<div style="display: flex; align-items: center;">  <div style="margin-left: 20px;"> <p><u>NYSSO Chapters</u></p> <table style="width: 100%;"> <tr> <td>1. Capital District</td> <td>7. Mid Hudson Valley</td> </tr> <tr> <td>2. Central</td> <td>8. North Country</td> </tr> <tr> <td>3. Long Island-Nassau</td> <td>9. Rochester</td> </tr> <tr> <td>4. Long Island-Suffolk</td> <td>10. Southern Tier</td> </tr> <tr> <td>5. Lower Hudson Valley</td> <td>11. Western Out of State</td> </tr> <tr> <td>6. Metropolitan</td> <td></td> </tr> </table> </div> </div>	1. Capital District	7. Mid Hudson Valley	2. Central	8. North Country	3. Long Island-Nassau	9. Rochester	4. Long Island-Suffolk	10. Southern Tier	5. Lower Hudson Valley	11. Western Out of State	6. Metropolitan	
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Membership Categories

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