### Troubleshooting Fitting Issues

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<th>Symptom</th>
<th>Solution</th>
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| Patient has narrow reading area. | - Verify fitting height and PD measurements  
- Verify ADD power  
- Add pantoscopic tilt and decrease vertex distance |
| Peripheral vision blurs and moves. | - Adjust frames to decrease vertex distance and to increase facial wrap |
| Patient lifts head or glasses to read. | Lenses are fit too low:  
- Adjust frames to sit higher on patient’s face  
- Adjust nose pads closer together  
- Decrease pantoscopic tilt  
- If necessary, refit lenses |
| Patient lowers head or glasses to read at a distance. | Lenses are fit too high:  
- Adjust frames to sit lower on patient’s face  
- Lower frames by widening nose pads  
- Increase pantoscopic tilt  
- If necessary, refit lenses |
| Patient moves reading material off to side for better focus. | PD is off or lenses are mounted incorrectly:  
- Use lens cling to verify lenses are on iris  
- Verify monocular PD measurements  
- Have lenses remade with correct PD measurements |
| Distance vision is slightly blurry. | - Increase pantoscopic tilt  
- Decrease fitting height |
**Fitting**

**ADJUST THE FRAME**
- Adjust the frame on the patient for maximum comfort and accuracy before taking any measurements
- Set the vertex distance between 12 and 14mm
- Set the pantoscopic tilt angle between 6° and 8°
- Frame should have positive facial wrap

**MEASURE PUPILLARY DISTANCE (PD)**
- Always take monocular PD to ensure exact centering of the eye behind the lens
- Varilux® lenses should be fitted using distance monocular PD

**MEASURE FITTING HEIGHT**
- Situate yourself directly in front of patient’s eyes
- Mark each lens at center pupil using a felt-tip pen
- Draw a horizontal line on each lens and double-check to make sure that the lines are crossing the center of each pupil
- Measure the fitting height from the deepest point of the lens to the horizontal line
- For zyl frames, measure to the lowest point of the bevel

**CHECK LENS CUT-OUT**
- Mark the patient’s fitting height and distance PD on the sample lens, creating a cross
- Place the lens cross over the layout chart cross to verify that the lens will fit within the lens diameter circle
- If the lens does not fit, choose another, more suitable frame that will accommodate the lens

**Dispensing**

**CONFIRM MEASUREMENTS AND PRESCRIPTION**
- Using the centering chart, center the frame over the inverted “V”
- Confirm the monocular PD and fitting height
- Confirm distance Rx with lensometer*
- Confirm prism at prism reference point (PRP)

*The abbreviated ADD power is engraved on the temporal side of all Varilux lenses and should be used to verify ADD power. Abbreviated ADD power is the first two digits of the actual ADD power to the nearest 0.25 diopters. For example, 22 is equal to 2.25.

**RECREATE FITTING CROSS (IF NEED)**
- Mark the lens micro–circles with a felt tip pen
- Lay the glasses over the cut-out chart and align the micro–circles to the micro–circles on the cut-out chart
- Mark the fitting cross with a felt tip pen

**VERIFY COMPENSATED Rx WITH A DUAL PACK SLIP**
- Verify the original prescription matches what was ordered
- Apply ANSI tolerances to compensated values

**CONFIRM FIT ON PATIENT**
- With lenses marked or using decals, verify that the fitting of cross is at center pupil
- Adjust the frame to raise or lower the fit, if necessary

**Understanding**

The following markings are used to verify the properties of a progressive addition lens (PAL):

1. **Fitting Reference Point (FRP)** - Also called the fitting cross. Designates the point on the lens that should be placed along the optical axis of the patient (center of pupil). Once removed, this marking may be recreated using a layout chart.
2. **Prism Reference Point (PRP)** - Located 4mm below the FRP, this is the optical center of a PAL, and it's used to check prismatic properties. Prescribed or thinning prism should be verified at this point.
3. **Two Engraved Micro–Circles** - Situated 17mm to each side of the PRP, these circles are used to verify the axis alignment and can be used with a layout chart to recreate the FRP marking.
4. **Design Identifier** - An engraving located under the nasal micro–circle that's unique to each PAL design.
5. **Material Identifier** - Appears to the right of the design identification and denotes the material.
6. **ADD Engraving** - Appears under the temporal micro–circle and denotes the ADD power. Verification of ADD power should be made with the engraving, not with the near verification circle.
7. **Distance Verification Circle** - Located above the FRP, this area of the lens may be used to verify prescribed distance power but cannot be used to verify prism.
8. **Near Verification Circle** - Located 13–19mm below the FRP, the near verification circle is no longer used to verify total near power. Modern PALS have varied insets and progression lengths that may place the near area outside of the circle. True ADD power cannot be read by a lensometer, since the worn position of the lens will vary from the lensometer mounting.

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