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**Instructions
for Installation of
Diverter Mirror in FC-446-030**

To replace the Diverter Mirror in the FC-446-030 the following procedure is recommended: (Note: The toroidal mirror was factory aligned and should not require any adjustments. This procedure assumes that toroidal mirror is still in factory alignment. If the toroidal mirror has been adjusted the unit will need to be returned to the factory for realignment).

1. Loosen the setscrew at the back of the cylinder housing and slide the cylinder back. This exposes the support posts and mirrors. Caution: Do not touch, talk or breathe on the optics.
2. Loosen the setscrew holding the diverter mirror holder in the housing. This is just above the fiber optic input on the housing side.
3. Note the orientation of the diverter mirror and carefully reach in with a flat bladed screwdriver under the diverter mirror and gently push up on the bottom of the mirror until the mirror holder comes out of the housing. Remove the mirror and holder from the housing.
4. Orient the new diverter mirror assembly to the same orientation as the one removed. Refer to the attached drawing (8401-059-30). Insert the diverter mirror assembly into the housing assuring the corners of the mirror do not contact the housing. The top of the holder will be flush with the top of the housing when the mirror is in place.

To optically align the diverter mirror the following procedure is recommended.

5. Attach the FC-446-030 with a $\frac{3}{4}$ " spacer installed to the exit slit of a SpectraPro monochromator. Install a white light source on the SpectraPro and scan it to zero order.
6. View the image from the monochromator at the input for the fiber optic bundle. (Note: It may be necessary to darken the room to see the image).

7. Rotate the mirror using pins in the holes or a spanner until the image is centered in the left to right direction in the fiber optic input port.
8. If the image is not centered in the height of the input port locate the setscrew in the flange of the diverter mirror holder and gently tighten the setscrew until the image is centered. **CAUTION!** Do not adjust the image above the center as it has very limited return motion.
9. Repeat step #7 if necessary.
10. Tighten the setscrew above the fiber input to lock the mirror in place.
11. Slide the cylinder housing back in and tighten the setscrew.

