

Optics Cleaning Procedure for PIR9400



Det-Tronics model PIR9400 Pointwatch IR Gas Detector requires optical surface cleaning only if optical fault is indicated (shown as a 1.0 milliampere current output signal, or an “optics fault” message on the Infiniti transmitter display). If this fault has been indicated, electrical disconnection, physical removal, and disassembly of the Pointwatch IR module is required to perform the recommended cleaning procedure. The cleaning procedure should be performed on a clean benchtop surface.

Important: *Remove power before disconnecting and removing the Pointwatch from the field installation!*

Required equipment: Clean work surface, foam-tipped swabs (no cotton), isopropyl alcohol, screwdriver or hex wrench

Procedure:

Disassemble the detector as shown in instruction manual figure 9 (aluminum) or figure 10 (stainless steel). Loosen two captive screws located at the end of the detector, and slide the filter assembly off of the instrument. Set the filter assembly aside. For the stainless steel model, also remove the stainless steel collar.

Loosen the two captive screws located at the end of the mirror assembly (figure 11), and slide the mirror assembly, hydrophobic screen (aluminum only), and reflector tubes away from the electronics assembly. See figures 24 (aluminum) and 25 (stainless steel). Separate the mirror assembly, reflector tubes, and hydrophobic screen if present.

Using isopropyl alcohol, thoroughly douse interior of the mirror assembly and the foam tipped swab. Use the swab to then gently cleanse the surfaces of the reflecting mirrors inside of the mirror assembly. Use a liberal amount of isopropyl alcohol to flush out the mirror assembly after using the swab. Tip the mirror assembly with mirror openings downward, and repeat the alcohol flush to remove particle contaminants. Place the mirror assembly aside after completion, and allow to air dry in a dust-free place.

Important: Do not insert any sharp object into the mirror assembly! *Scratching of the mirrors will void the Pointwatch warranty.* Do not use cotton-tipped swabs or buds as they are likely to leave fiber residue.

Repeat cleaning step above for the (2) reflector tubes. Allow the mirror assembly and reflector tubes to dry thoroughly. Proceed with re-assembly when all optical surfaces are clean and dry. For aluminum models, replace the hydrophobic screen with a new one, taking care to not fold or crumple the screen. Reassemble the Pointwatch in reverse order as listed above. The Pointwatch requires **no** force fit of components to reassemble.

Reinstall the Pointwatch in the field, and re-calibrate the Pointwatch with 50% LEL calibration gas type that matches the PIR9400 gas selector switch setting. This step must be performed after each re-assembly to ensure accurate gas measurement and performance. Refer to the instruction manual for addition calibration information.