PIR Fan Motor Replacement

I. Purpose:

This procedure explains the steps for replacing a PIR fan-motor assembly located in the two ventilators which house the uplooking (downwelling) radiometers.

II. Cautions and Hazards:

- Exercise Caution: Ventilators run on 12VDC; disconnect power before attempting procedure.
- This procedure requires two people; one person is responsible for holding the radiometer while the other person switches out the ventilator.

III. Requirements:

- Small tray or cup to hold screws.
- Foam cushion (from radiometer shipping box).
- Two technicians.
- New fan motor.
- Allen wrench.
- Assembly replacement form.

IV. Procedure:

A. Steps:

1. Disconnect power to the PIR ventilator; remove fuse # ( ) from SKYRAD power distribution box.
2. Remove ventilator mounting screws which hold ventilator and radiometer to mounting plate on stand.
3. Lean unit with cable connection down and use foam cushion to protect sensor head cover from hitting or bumping radiometer stand.

   NOTE: Do not lean unit on connectors or crimp the cables. Lay the PIR gently down on its side. Radiometers are expensive. The technician holding the radiometer should not attempt to help with any other part of the procedures.
4. Remove outer mesh from bottom of radiometer, ventilator.

5. With the radiometer on its side, remove the four (4) allen screws attached to the ventilator fan. Keep all four (4) screws and lock washers in the tray or cup.
6. Disconnect the power connection from the ventilator.
7. Remove fan and replace with new one.
8. Reconnect wires and allen screws.

   NOTE: The ventilator fan is made of plastic. Excessive tightening of the allen screws shatters the plastic.
9. Reattach the outer mesh to bottom of ventilator using a thin ring of silicone caulk.
10. Set the instrument upright on its mount and reattach the screws holding the instrument ventilator to the mounting plate. Be sure that the instrument connector is again pointed towards the equator.
11. Check the level on the instrument. If the instrument is level, proceed to step L. If the instrument is not level, follow PIR Leveling Procedure **PRO(PIR)-001.**, then proceed to step 12.
12. After leveling is complete and instrument ventilator fan is replaced, return power to the ventilator by reinstalling the fuse removed in step 1. Check that the ventilator is working by holding hand above instrument dome (being careful not to touch the dome). You should feel air moving up from around the dome.
13. Record date, starting-time, ending-time, comments, and fill out assembly replacement form.

V. References:

1. Mike Rubes, Chris Cornwall, and Scott Smith at SNL March 2, 1995.

VI. Attachments:

None.