

# DIRT SENSOR DIAGNOSIS

## In Operation

When the vacuum is being moved back and forth on the floor, the light will change from one configuration to another as more or less dirt is vacuumed. As long as the red light is on, dirt is passing through the vacuum to indicate that the surface is in need of cleaning. When the green light stays on as the vacuum is moved back and forth over an area, the sensor is not seeing enough dirt to warrant further cleaning of that area.

## Testing of Dirt Sensor

1. If normal initial start up of dirt sensor occurs but the red light does not come on during normal operation over a known dirty surface, block both photo optic cells, (Fig. 18), while the green light is on. The red light should come on. After unblocking the optic cells, the green light should come on after a few seconds.

2. If the red light does not come on after blocking the optic cells, you should wipe them with a clean, dry, soft cloth.

**NOTE: Never use water or any cleaning solution when cleaning the lenses. The residue of the water or cleaners will accelerate the recoating of the lenses and will necessitate cleaning them sooner.**

3. If the sensor indicators are not working properly after cleaning the optic cells, visually check all wire connections. To access the dirt sensor see the **Removal** section below.

4. If no lights are on at any time during start up or during normal operation, check the voltage at TP1 and TP2, which are solder points coming from the power cord to the lower circuit board of the PCB assembly, for approximately 120 Volts.

5. If the voltage is OK, replace the LED/PCB assembly. If voltage does not exist, check wire connections between power cord & the LED/PCB assembly.

## Removal

**NOTE: Pay close attention to the way the wires are routed to ensure they are put back in the same manner when replacing parts.**

1. Remove the dust bin, handle cover, filter cover and exhaust filter.
2. Remove the air path tube that contains the optical cells for the dirt sensor.
3. Remove the wire connectors and the PCB assembly.
4. To remove the optic cells from the air path tube, remove the two (2) screws that secure them.

## Assembly

1. Place the optic cells back on the air path tube and secure them with the screws.
2. Place the wire connectors back on the new PCB assembly and install it back into the vacuum in reverse order from which it was removed.
3. Reinstall the dust bin, handle cover, filter cover, exhaust filter, and dust cover.

