

6400-907 Air Pump

Repair Instructions for the LI-6400 Portable Photosynthesis System

1. Disconnect the batteries and remove from the console. Disconnect all hoses and cables from the console.
2. Remove the eight screws (nine screws on console serial numbers PSC101-160) on both sides of the LI-6400 console case with a Phillips head screwdriver. Grip the carrying handle and lift the card cage straight up and out of the case.
3. The air pump is located on the underside of the card cage, as shown in Figure 1. Unplug the electrical connector and remove the single screw that attaches the air pump to the card cage (Figure 2). Remove the air hoses.
4. Make a mark on the side of the air pump head, as shown in Figure 3, to ensure that during reassembly the parts are put back together correctly.
5. Remove the 4 screws on the top of the air pump head and the single screw holding the diaphragm to the pump shaft (Figure 4).
6. Replace the diaphragm, O-rings, and flapper valves, as shown in Figure 5. You may need to rotate the pump shaft slightly so that it is in an upright position to attach the diaphragm.
7. Reassemble the pump head and reattach to the underside of the card cage.
8. Plug in the electrical connector and reattach the air hoses. You may want to trim the ends of the hoses 1/4" or so to ensure a tight seal. **Important!** Note the proper orientation of the air hoses. The hose leading to the Air Inlet on the pump is attached to the buffer volume nearest the air pump, and the hose leading to the Air Outlet is attached to the buffer volume farthest from the air pump.
9. Reassemble the LI-6400 console.

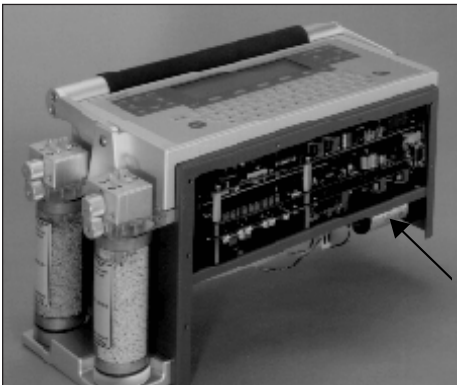


Figure 1. Location of air pump.

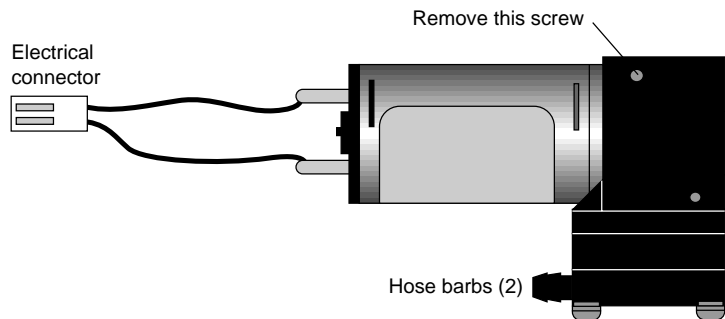


Figure 2. Remove the screw shown.

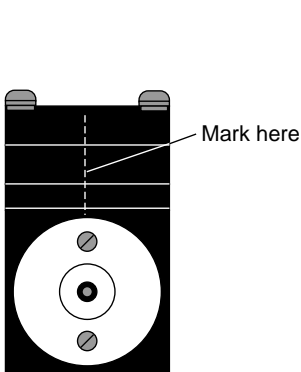


Figure 3. Mark the side of the air pump head.

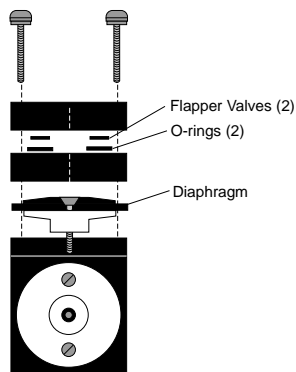


Figure 4. Disassemble the air pump head.

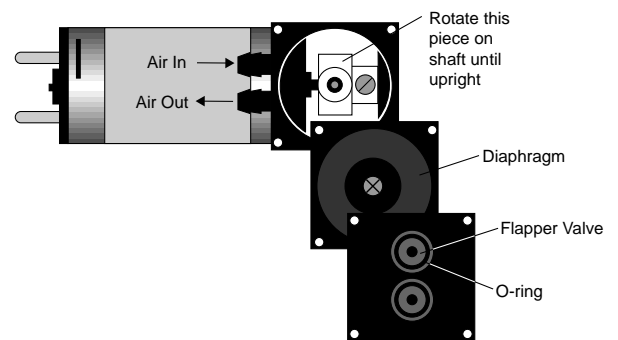


Figure 5. Replace the diaphragm, O-rings, and flapper valves.

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