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Heart-lung machine is a device used to take over the functions of heart and lung during open heart surgery. Usually, it is not possible to perform heart surgery while the heart is operating thatâ€™s why the heart is temporarily stopped and its basic function such as blood circulation and oxygenation is carried out by the heart-lung machine. When the heart is stopped temporarily, a surgeon can perform the surgery in a blood-free heart with ease. Heart-lung machine is also referred as a pump due to its pumping ability.

Basically, a heart-lung machine consists of a pump and an oxygenator. In a heart-lung machine, the pump performs the function of the heart and the oxygenator performs the function of the lung during open heart surgery. A heart-lung machine acts as a mechanical heart and lungs, supplying oxygen-rich blood throughout the body regularly and continuously. It performs an important process known as perfusion during which the machine receives the patientâ€™s impure blood and removes the carbon dioxide and other waste from the impure blood and converts it into pure blood before supplying the blood throughout the body.

During the perfusion process, the heart-lung machine warms or cools the blood to maintain the patientâ€™s body temperature effectively. When the heart surgery is completed, the heart-lung machine is stopped and the heart is restarted to take over its function.

Before even planning the open heart surgery, it is vital to analyze the performance of the heart-lung machine. The hearts vital functions such as maintaining body temperature, blood circulation and oxygenation needs to be carried out continuously without any interruptions when the heart is temporarily stopped for open heart surgery.

Sudden malfunction that occurs in the heart-lung machine can make things very complicated and can be life threatening for the patient. Usually, a certified perfusion technologist takes care of the heart-lung machine which performs the blood circulation and oxygenation process in a regular and continuous basis. To avoid sudden malfunctions with the heart-lung machine, it is important to perform cardiovascular services that involve analyzing the performance of the heart-lung machine, inspecting possible defects, and performing preventive maintenance.

When looking for to repair a heart-lung machine and for preventive maintenance, specialists make sure they are certified to handle latest equipments. The heart-lung machine designed by different manufacturers, might have different operational modes and equipment. So, you need to look for a repair specialist who is specialized in handling such modern heart-lung machines.

A heart-lung machine, also known as a cardiopulmonary bypass, consists of several components that perform specific functions such as oxygenating blood, removing carbon dioxide, pumping out blood and more. So, it is important to perform bypass maintenance on a regular basis to enhance and keep the machine in good working condition.

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Regular a bypass maintenance not just enhances the lifespan of a cardiopulmonary bypass but keeps it in good working condition too. The author is an expert in the heart-lung machine arena and has written many articles regarding a cardiovascular services and bypass services in the past.

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