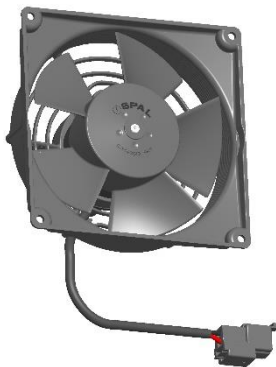
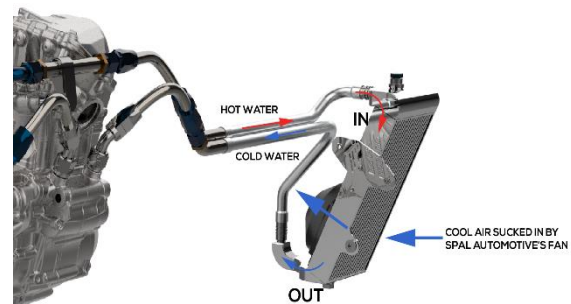


During the 2018/19 season Oxford Brookes Racing (OBR) used industry leading SPAL Automotive's cooling fans, which proved crucial in the development of OBR19's active cooling systems.



VA69A-A101-87A 12V 115 mm fan



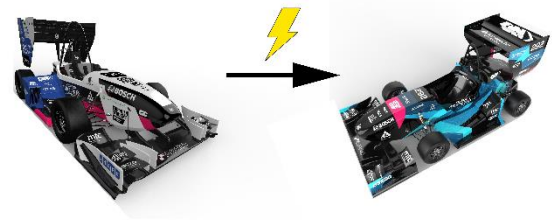
OBR19 Cooling Diagram

A race car performs at its best when the temperatures are within an optimal range. OBR19 stays within that optimal range by using active cooling methods. Active cooling refers to cooling technologies that rely on an external device, such as a fan, to improve the rate of heat transfer. The rate of fluid flow increases during convection through active cooling technologies, which dramatically increases the rate of heat removal. These solutions include forced liquid, thermoelectric coolers (TECs), or in OBR's case, forced air through a fan.

Let's look at how Oxford Brookes Racing keeps its OBR19 car within that optimal temperature range. OBR19's engine is cooled by using two radiators which are placed on the side wings. Attached behind each radiator are SPAL Automotive's VA69A-A101-87A 12V 115 mm fans which extract cold ambient air. This cold air passes through the radiator fins where the hot coolant passes from the top to the bottom of the radiator, as illustrated in the diagram.



*OBR19 Passive Cooling*



*OBR19 (ICE) to OBR20 (EV)*

When the car moves, it drives into the air which contributes to the cooling performance. However, when the car is idle, we must rely on the active cooling method to continue driving air through the radiators. With the help of SPAL Automotive's efficient fans the cooling performance increased dramatically, and the team prevent the car from overheating and consistently hit the target cooling temperatures while the car remains idle.

With OBR moving from combustion to electric, the team engineers now must face new complicated cooling challenges. With an electric powertrain, the team now focuses on cooling the countless number of critical electronic components in the car. However, with SPAL Automotive's support we are confident that the team can address this exciting, albeit challenging shift with relative ease. At Oxford Brookes Racing, we are fans of SPAL Automotive's products and we look forward to an exciting season working alongside the leaders of the cooling technology industry.