***Abstract* —**

An air-cooled motorcycle engine releases heat to the atmosphere through the mode of forced convection. To facilitate this, fins are provided on the outer surface of the cylinder. The heat transfer rate depends upon the velocity of the vehicle, fin geometry and the ambient temperature. Many experimental methods are available in literature to analyze the effect of these factors on the heat transfer rate. However, an attempt is made to simulate the heat transfer using CFD analysis. The heat transfer surface of the engine is modeled in SOLID WORKS PREMIUM 2014 and simulated in SOLID WORKS software. An expression of average fin surface heat transfer coefficient in terms of wind velocity is obtained. It is observed that when the ambient temperature reduces to a very low value, it results in overcooling and poor efficiency of the engine**.**