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To Whom It May Concern:

I worked with Jessica Nicholson for 6 months while she completed a PPS (product problem solving) Engineering CO-OP for Cummins at the Jamestown Engine Plant. At JEP we handle all engineering responsibilities related to the production of 11L, 12L and 15L heavy duty engine production for applications ranging from on highway, marine, construction, stationary power generation and agriculture. A PPS engineer's role is to work with the reliability team to identify durability issues related to the product and correct them to protect the customer and avoid repetition of failures in the future. A PPS engineer requires sound physics based analytical reasoning and the ability to work with a diverse range of colleagues from engineers to service technicians. In addition, a PPS engineer must have the ability to work independently as their own project manager to achieve an effective solution in a timely manner.

During her CO-OP Jessica worked on a variety of projects. Jessica's key accomplishments and results include commonization of a thrust bearing for a fuel pump idler gear assembly as well as diagnosing a coolant bypass tube cracking phenomenon. Jessica worked to design a new thrust plate bearing that could be used in place of a legacy thrust ring bearing. The thrust ring was prone to assemble errors which can result in mission disabling damage for customers. The redesigned thrust plate enables service and new engine production technicians to assemble the fuel pump idler gear without risk of misalignment. For the coolant bypass tube cracking phenomena Jessica took it upon herself to develop a proficiency in ANSYS to run several analytical studies aimed at understanding the failure mode as well as potential solutions. Through a combination of sound physics based reasoning as well as with the aid of outside subject matter experts Jessica has proposed a short term solution that can be implemented at the supplier as well as long term solutions aimed at better specifications on our prints. This work will further feed into product refinement on other applications. During her CO-OP Jessica also lead several other projects including working with assembly to resolve a fitment issue on a breather tube assembly, proposing a new material for a check valve tube as well as being asked to lead an effort to implement an existing idler shaft into a legacy product for dual cam customers.

Based on my observations working with Jessica, her core strengths are a strong work ethic that includes an ability to identify and acquire skills necessary to accomplish her task. An example of this was when she worked to acquire ANSYS and developed an ability to run simulations to understand the coolant bypass tube cracking. In addition, Jessica possesses strong project management skills which enable her to run multiple projects simultaneously. Lastly, Jessica is an effective communicator and someone who can lead group discussions even when working with colleagues more senior than she is. These are skills that are generally acquired through experience and the fact that she was able to demonstrate them early in her career will prove an asset to her down the road.

Because of Jessica's demonstrated work ethic, communication skills and strong analytical approach to problem solving I feel quite confident she will succeed in any role she chooses to pursue.

Sincerely,

Corey Thompson