Team Goals and Objectives

In the initial days of the project, Darley Havidson set several different goals and objectives for the the team to achieve by the end of the project:

Team Goals:

Full Engine CAD Assembly: The final assembly of the engine should include all parts and systems deemed to be within the scope of the project, along with any fasteners, fittings, bearings, etc. associated with said parts. Any purchased parts in the assembly need not be fully functioning, but should have a sufficiently detailed part created.

Full Bill of Materials: The final BOM should include part name, number, material, manufacturing method, quantity, weight, unit cost and detailed description for every part. Parts should be designated as purchased or manufactured, and any purchased parts should additionally have supplier and part number information in the BOM.

Final Report: The final report should in detail describe the submitted engine, along with the design process, relevant technical information and a thorough theory of operations for the engine and all subsystems within it. The report should be able to be read easily such that the Spartan Motorcycle can produce and improve the engine with little difficulty.

Team Objectives:

Experience: Many different skills and techniques were required to complete this project. The team wanted each member to not only use their skills they have already developed, but also implement and learn new skills that they can bring with them moving forwards. Some things that team members have learned or improved upon include CAD, Matlab, cycle analysis, thermodynamic analysis and a multitude of others.

Project Management: One of the aspects of the project that was new to most of the team members was working in a large design team where they could not be involved in every aspect of the project. The team hoped that each member would gain valuable experience in planning such a complex and large project, specifically in the project planning phase, but also as the project continued through the more design oriented phases.

Teamwork Development: In addition to managing a large team, the individual team member interactions and sub-team interactions were new to many members. The team hopes to continue the development of these interpersonal skills and how to effectively communicate ideas and results between so many people. As the team moves into real world work environments, these skills will become essential to becoming a successful engineer.