CONVERTIBLE COOLING SYSTEM FOR SMALL ENGINE LAB

Client: Dan Cordon

The Small Engine Research Facility (SmERF) is in need of a cooling system upgrade. The eddy current dynamometer is capable of absorbing ~260 kW of power. The power is absorbed in to a recirculating water flow that must be cooled down to near room temperature before entering the dynamometer again. Engine cooling is also a consideration, and a similar power level for engine cooling is expected. Engineers on this project should create a thermal model that will predict the radiator size and airflow requirements necessary to run the dynamometer at steady state under peak power. The system is expected to be convertible between the eddy current dynamometer and the water brake dynamometers. The system should be able to be installed in the SmERF with minimal downtime to dynamometer.