120VAC 60Hz

Power Supplies (5VDC, 12VDC, 28VAC)

X4 Relays

Electronic Control Unit

8-input, 2-output DAQ

7 Port USB Hub

Servo Contr.

X3 UTC-USB

Thermocouples

Exhaust Valve

Intake Valve

Direct injector

5 HP, 4 stroke Internal Combustion Engine

Direct Injector

Choke Solenoid

H2O Tank w/ in-tank 120PSI Pump

Graduated Cylinder (Fuel Tank)

5 HP, 4 stroke Internal Combustion Engine

Stroke Sensor

TDC Sensor

PMDC Motor / Generator

Coupling

Encoder

Shunt Resistor

2 kW Dummy Load

Voltage Dividers

Speed & Timing Servos

PMDC Motor / Generator

DAQ

Legend

Mechanical Link

Engine Mods / Additions

Electrical Hookup

Sensor Signals

Control Signals

Project Scope