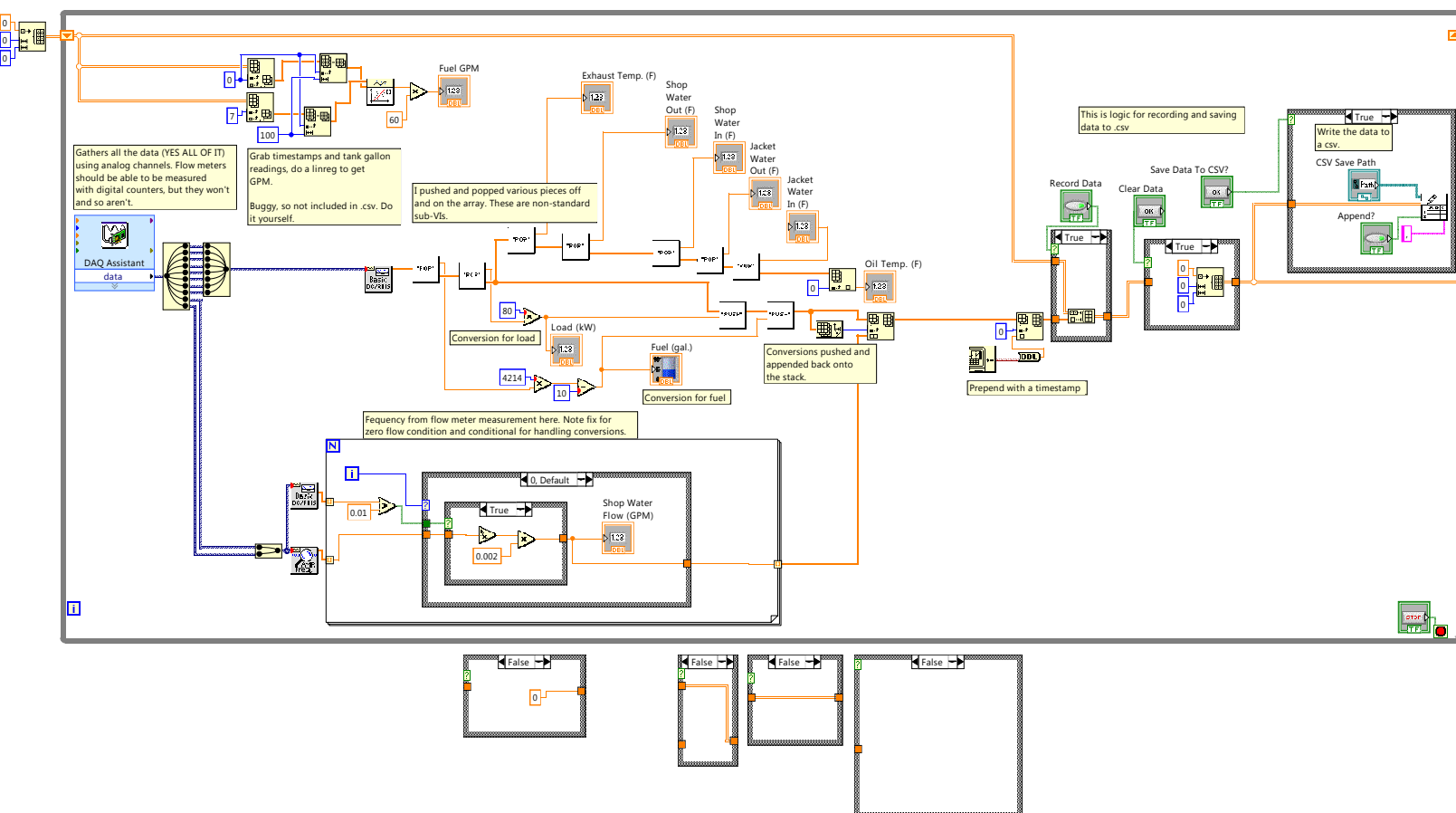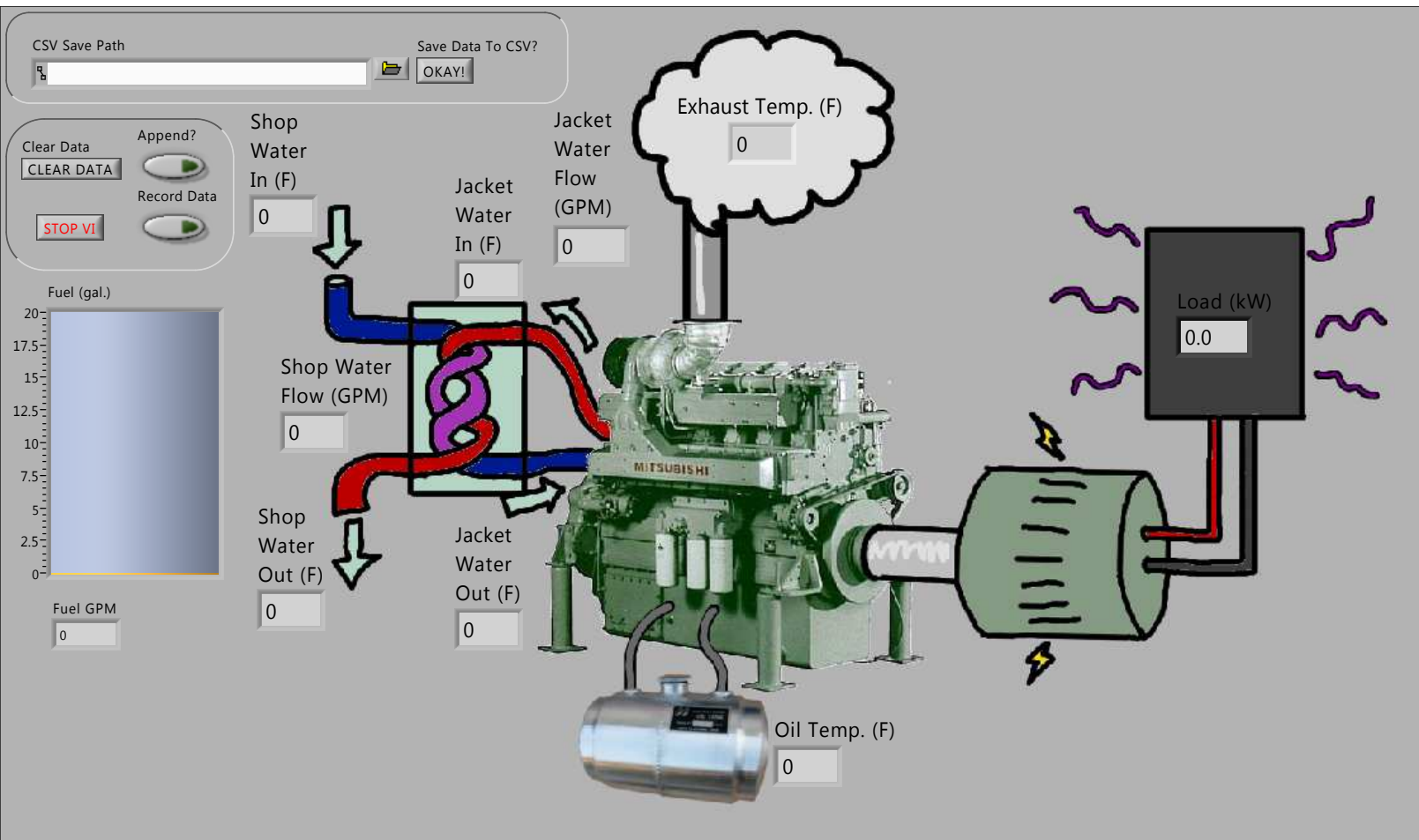generator.vi
C:\Users\Mech414\Desktop\generator.vi
Last modified on 4/19/2011 at 9:55 PM
Printed on 4/19/2011 at 10:03 PM
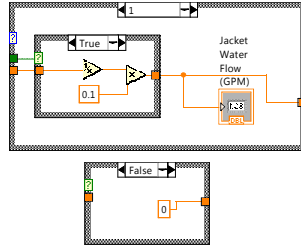
CSV Save Path

Save Data To CSV?

OKAY!

Clear Data

Append?

CLEAR DATA

Record Data

STOP VI

Fuel (gal.)

20
17.5
15
12.5
10
7.5
5
2.5
0

Fuel GPM

0

Shop Water In (F)

0

Jacket Water In (F)

0

Jacket Water Flow (GPM)

0

Exhaust Temp. (F)

0

Load (kW)

0.0

Shop Water Flow (GPM)

0

Shop Water Out (F)

0

Jacket Water Out (F)

0

Oil Temp. (F)

0

Fuel GPM

Exhaust Temp. (F)

Shop Water Out (F)

Shop Water In (F)

Jacket Water Out (F)

Jacket Water In (F)

Gathers all the data (YES ALL OF IT) using analog channels. Flow meters should be able to be measured with digital counters, but they won't and so aren't.

Grab timestamps and tank gallon readings, do a linreg to get GPM.

Buggy, so not included in .csv. Do it yourself.

I pushed and popped various pieces off and on the array. These are non-standard sub-VIs.

This is logic for recording and saving data to .csv

Record Data

Save Data To CSV?

Clear Data

Write the data to a csv.

CSV Save Path

Append?

DAQ Assistant

data

Oil Temp. (F)

Conversion for load

Load (kW)

Fuel (gal.)

Conversions pushed and appended back onto the stack.

Prepend with a timestamp

Conversion for fuel

Fequency from flow meter measurement here. Note fix for zero flow condition and conditional for handling conversions.

Shop Water Flow (GPM)

0, Default

True

False

False

False

False

generator.vi
C:\Users\Mech414\Desktop\generator.vi
Last modified on 4/19/2011 at 9:55 PM
Printed on 4/19/2011 at 10:03 PM

Write To Spreadsheet File (DBL).vi
C:\Program Files (x86)\National Instruments\LabVIEW 2009\vi.lib\Utility\file.llb\Write To Spreadsheet File (DBL).vi

Write To Spreadsheet File.vi
C:\Program Files (x86)\National Instruments\LabVIEW 2009\vi.lib\Utility\file.llb\Write To Spreadsheet File.vi

NI_MAPro.lvlib:Extract Single Tone Information N Chan.vi
C:\Program Files (x86)\National Instruments\LabVIEW 2009\vi.lib\measure\matone.llb\Extract Single Tone Information N Chan.vi

NI_MAPro.lvlib:Extract Single Tone Information.vi
C:\Program Files (x86)\National Instruments\LabVIEW 2009\vi.lib\measure\matone.llb\Extract Single Tone Information.vi

NI_MAPro.lvlib:Basic Averaged DC-RMS for N Chan.vi
C:\Program Files (x86)\National Instruments\LabVIEW 2009\vi.lib\measure\madcrms.llb\Basic Averaged DC-RMS for N Chan.vi

NI_MAPro.lvlib:Basic Averaged DC-RMS.vi
C:\Program Files (x86)\National Instruments\LabVIEW 2009\vi.lib\measure\madcrms.llb\Basic Averaged DC-RMS.vi

pop.vi
C:\Users\Mech414\Desktop\pop.vi

push.vi
C:\Users\Mech414\Desktop\push.vi

NI_AALPro.lvlib:Linear Fit.vi
C:\Program Files (x86)\National Instruments\LabVIEW 2009\vi.lib\Analysis\6fits.llb\Linear Fit.vi

DAQ Assistant
DAQ Assistant
Creates, edits, and runs tasks using NI-DAQmx. Refer to the NI-DAQmx Readme for a complete listing of devices NI-DAQmx supports.

When you place this Express VI on the block diagram, the DAQ Assistant launches to create a new task. After you create a task, you can double-click the DAQ Assistant Express VI to edit that task. For continuous measurement or generation, place a while loop around the DAQ Assistant Express VI.

For continuous single-point input or output, the DAQ Assistant Express VI might not provide optimal performance. Refer to the Cont Acq&Graph Voltage-Single Point Optimization VI in examples\DAQmx\Analog In\Measure Voltage.llb for an example of techniques to create higher-performance, single-point I/O applications.