

Bill of Materials

Part	Cost	Vendor	Notes
Arduino Uno R3	\$24.94	https://www.sparkfun.com/products/11021	
Serial LCD 2X 16 On dash enclosure	\$24.95	https://www.sparkfun.com/products/9394	Disconnect when loading sotware
Water resistant On-Off button On dash enclosure	\$6	Your choice. I'm using a shiny toggle from: Amazon	
Water resistant Next button On dash enclosure	\$6	Your choice. I'm using this one: Amazon	
EGT Thermocouple with threaded sensor	\$12	Aliexpress	
1-wire thermocouple board	\$14.95 X 2 = \$29.90	https://learn.adafruit.com/adafruit-1-wire-thermocouple-amplifier-max31850k/overview	Need two
Thermocouple. Long SS probe to replace dipstik	\$4.95	https://www.sparkfun.com/products/13715 or Amazon	
Tach Hall sensor	\$4.46	http://www.sainsmart.com	
Neo button magnets	\$0.99	Aliexpress	
Power Supply: USB Car Charger	\$8	Don't get a cheap one. It should put out at least 2amp	
Package of five DS18B20 Temp sensors with 2-meter cable	\$17	http://www.amazon.com/Vktech-Waterproof-Digital-Temperature-DS18b20/dp/B00EU70ZL8/ref=sr_1_3?ie=UTF8&qid=1450643892&sr=8-3&keywords=d+s18b20	You may need different sensors.
Arduino Project Box in Engine Room	\$6 - \$20	Amazon	
Dashboard display project box	\$6 - \$10	Amazon	
Plenum grade ethernet cable	\$0 - \$20	Ask your IT guy for some spare cable - enough to go between the two project boxes with some extra. Plenum grade is less likely to burn.	

Arduino Pin Layout

Pin	Use
+5 V	Serial LCD +5V
GND	Serial LCD GND
A0	Hall Sensor
A1	
A2	
A3	
A4	
A5	
0 - RX	Hall Sensor
1 - TX	Serial LCD RX
2	
3	
4	
5	
6	One-Wire thermocouple breakout board
7	
8	
9	
10	One-Wire temperature sensors
11	
12	
13	
GND	Serial LCD Data Ground