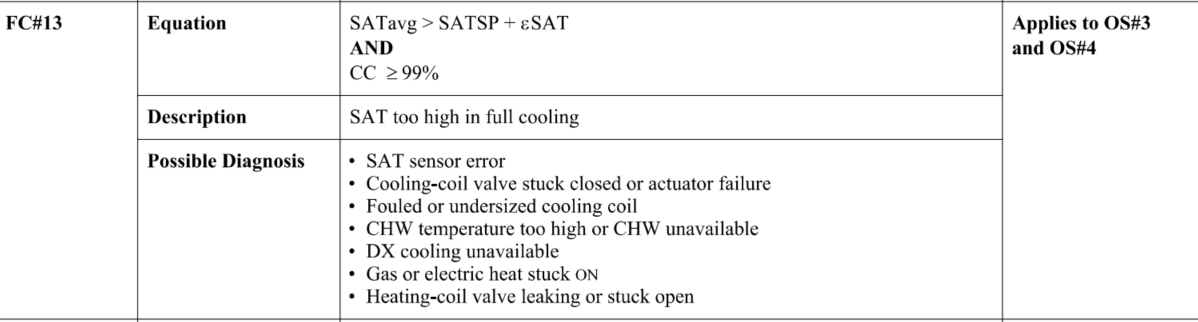
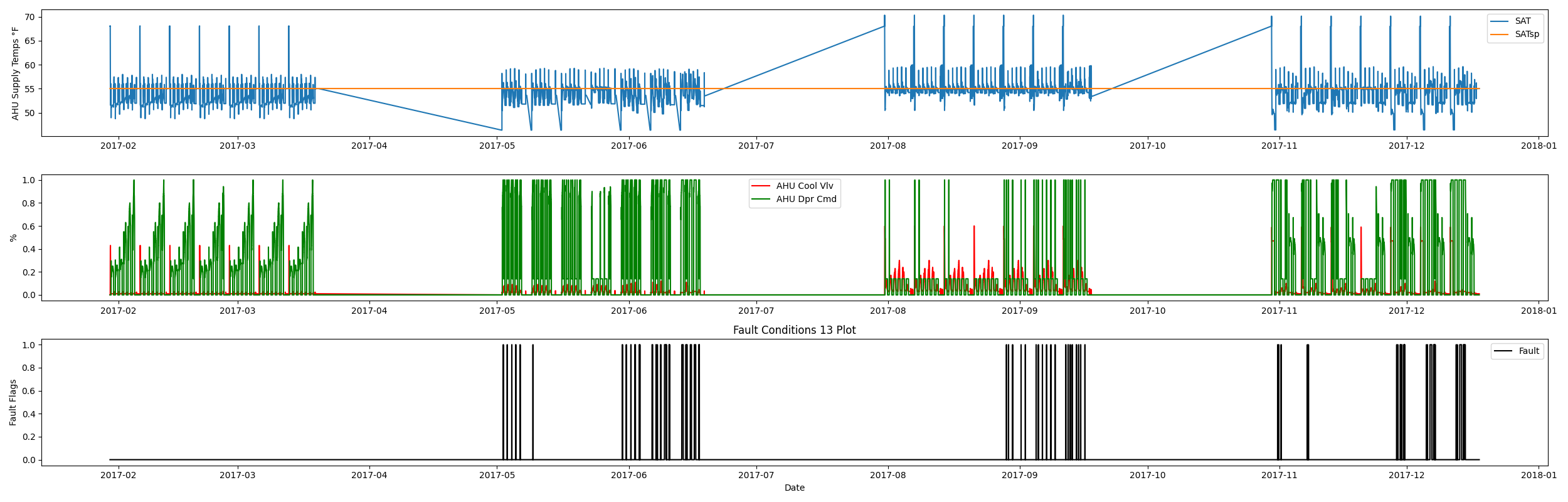
Fault Condition Thirteen Report

Fault condition thirteen of ASHRAE Guideline 36 is an AHU cooling mode only with an attempt at verifying an AHU cooling valve is not stuck or leaking by verifying AHU supply temperature to supply temperature setpoint. Fault condition thirteen equation as defined by ASHRAE:



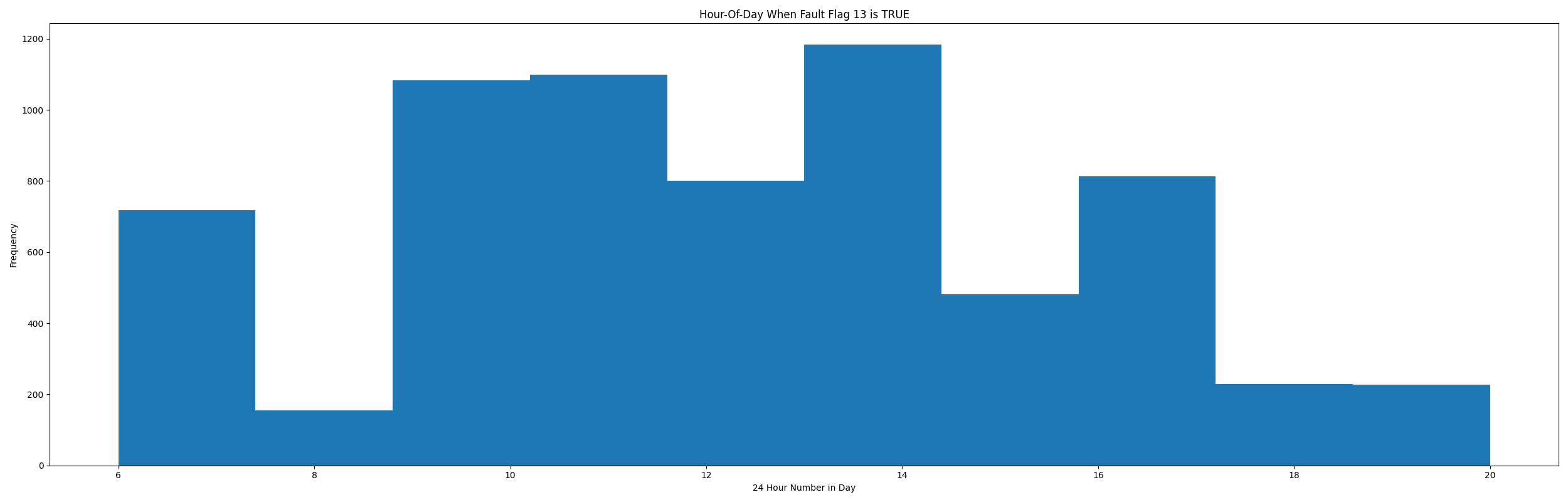
## Dataset Plot



## Dataset Statistics

* Total time in days calculated in dataset: 322.0
* Total time in hours calculated in dataset: 7727.983333333334
* Total time in hours for when fault flag is True: 113.2
* Percent of time in the dataset when the fault flag is True: 2.5%
* Percent of time in the dataset when the fault flag is False: 97.5%
* Calculated motor runtime in hours based off of VFD signal > zero: 3061.08

## Time-of-day Histogram Plots



* When fault condition 13 is True the average AHU supply air setpoint is 55.04 in °F and the supply air temperature is 56.08 in °F.

# Summary Statistics filtered for when the AHU is running

### Supply Air Temp

* count 183665.000000  
  mean 54.113744  
  std 1.730771  
  min 48.578000  
  25% 52.740000  
  50% 54.928000  
  75% 55.046000  
  max 70.310000  
  Name: AHU: Supply Air Temperature, dtype: float64

### Supply Air Temp Setpoint

* count 1.836650e+05  
  mean 5.504000e+01  
  std 2.131634e-14  
  min 5.504000e+01  
  25% 5.504000e+01  
  50% 5.504000e+01  
  75% 5.504000e+01  
  max 5.504000e+01  
  Name: AHU: Supply Air Temperature Set Point, dtype: float64

### Cooling Coil Valve

* count 183665.000000  
  mean 0.059317  
  std 0.097442  
  min 0.000000  
  25% 0.010000  
  50% 0.020000  
  75% 0.060000  
  max 0.600000  
  Name: AHU: Cooling Coil Valve Control Signal, dtype: float64

## Suggestions based on data analysis

* The percent True metric that represents the amount of time for when the fault flag is True is low inidicating the AHU cooling valve operates Ok.

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