**APMS Documentation**

**Equipment Name –** DG1 (Diesel Generator)

**Total Channels –** 84

**Channel Picked for training and forecasting** - 1652

1. We found 3 channels which had the same values (ie. identical channels) and 17 such channels are having only one value which shows no fluctuation. So, we dropped such channels from dg\_1.csv.
2. **Channel 1652** gives Aft DG1 Run Status.
3. Next, we divided timestamps into 225 instances based on **channel no 1652**. Then checked the duration of all the instances. After plotting the histogram of duration we conclude that we'll discard all the instances which have duration less than 10 min. eventually we left with 177 instances.
4. We have selected particular instances (which have ‘off’ value followed by ‘on’) of Channel 1652 and we'll predict the TTF (Time to failure) value of those instances only.
5. TTF values gives us the ‘Time to fail’ of that respective equipment and is used as target variable for model training.
6. There are few NULL values in timestamp for each channel which has been processed using forward fill in data processing step.

**Modelling Method - Time series Forecasting**

1. Then modelling is done keeping each channel of that equipment as independent variable and target value (TTF) as dependent variable which is used for forecasting.