

# EOT CRANE MONITORING SYSTEM

## 1. Introduction

This manual explains the pages of the live EOT crane monitoring dashboard (10 Ton crane). The system has five pages: Home, Vibration Insight, Energy Data, Logs and Daily Report.

Hardware installed: 4 vibration sensors, 1 level sensor, 1 energy meter and 1 temperature and humidity sensor.

## 2. Home Page

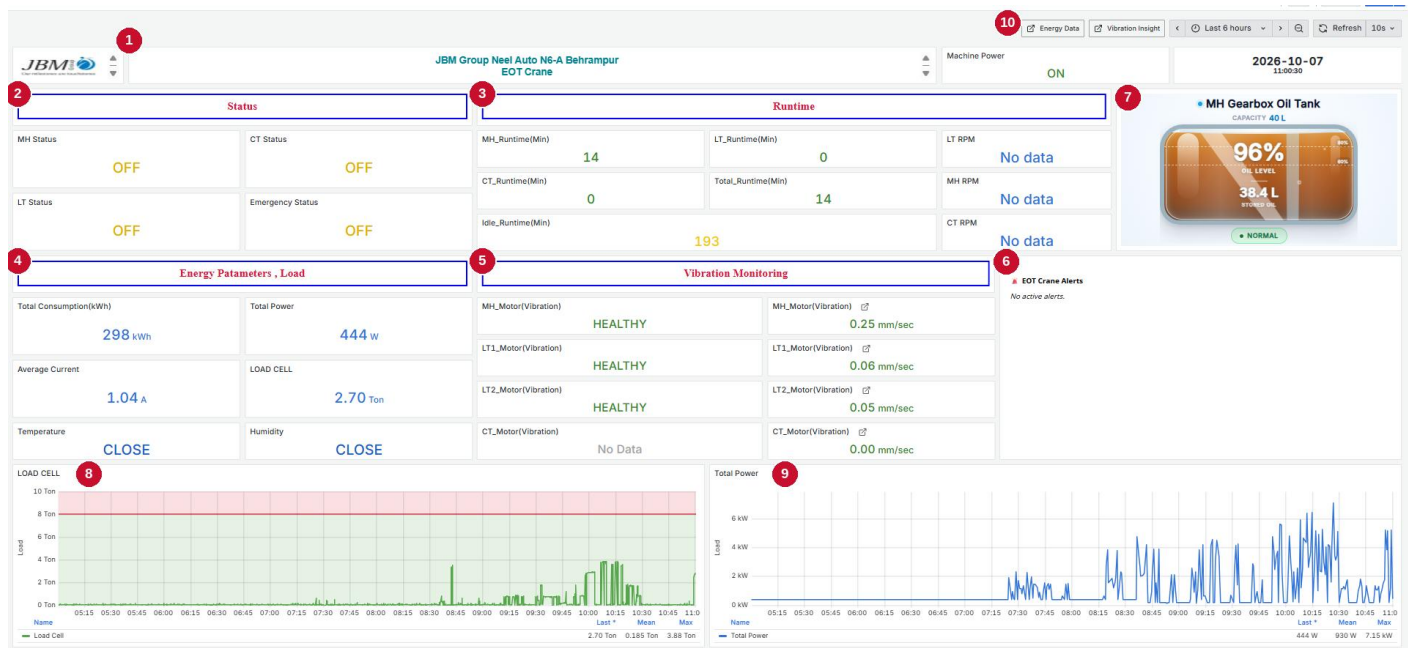


Fig.1: Home Page

- **(1) Header:** JBM logo, site address, Machine Power (ON/OFF) and the current date and time.
- **(2) Status:** Live ON/OFF of MH (Main Hoist), LT (Long Travel), CT (Cross Travel) and Emergency Status.
- **(3) Runtime:** Live running time in minutes of MH, LT and CT. Total\_Runtime is the sum of the three. Idle\_Runtime increases only when none of MH, LT and CT is running. RPM of MH, LT and CT is also shown.
- **(4) Energy Parameters, Load:** Live Total Consumption (kWh), Total Power (W), Average Current (A), Load Cell (Ton), Temperature and Humidity.
- **(5) Vibration Monitoring:** Health status (HEALTHY or not) and live velocity of MH, LT1, LT2 and CT motors. Click the link icon to open the Vibration Insight page.
- **(6) EOT Crane Alerts:** Shows an alert here whenever one occurs. Shows “No active alerts.” when normal.
- **(7) MH Gearbox Oil Tank:** Live oil level of the Main Hoist gearbox in % and litres.
- **(8) Load Cell Trend:** Graph of the lifted load (Ton) against time.

- **(9) Total Power Trend:** Graph of the total power (kW) against time.
- **(10) Top links:** Energy Data and Vibration Insight open those pages. The time filter sets the time range of the graphs.

### 3. Vibration Insight Page

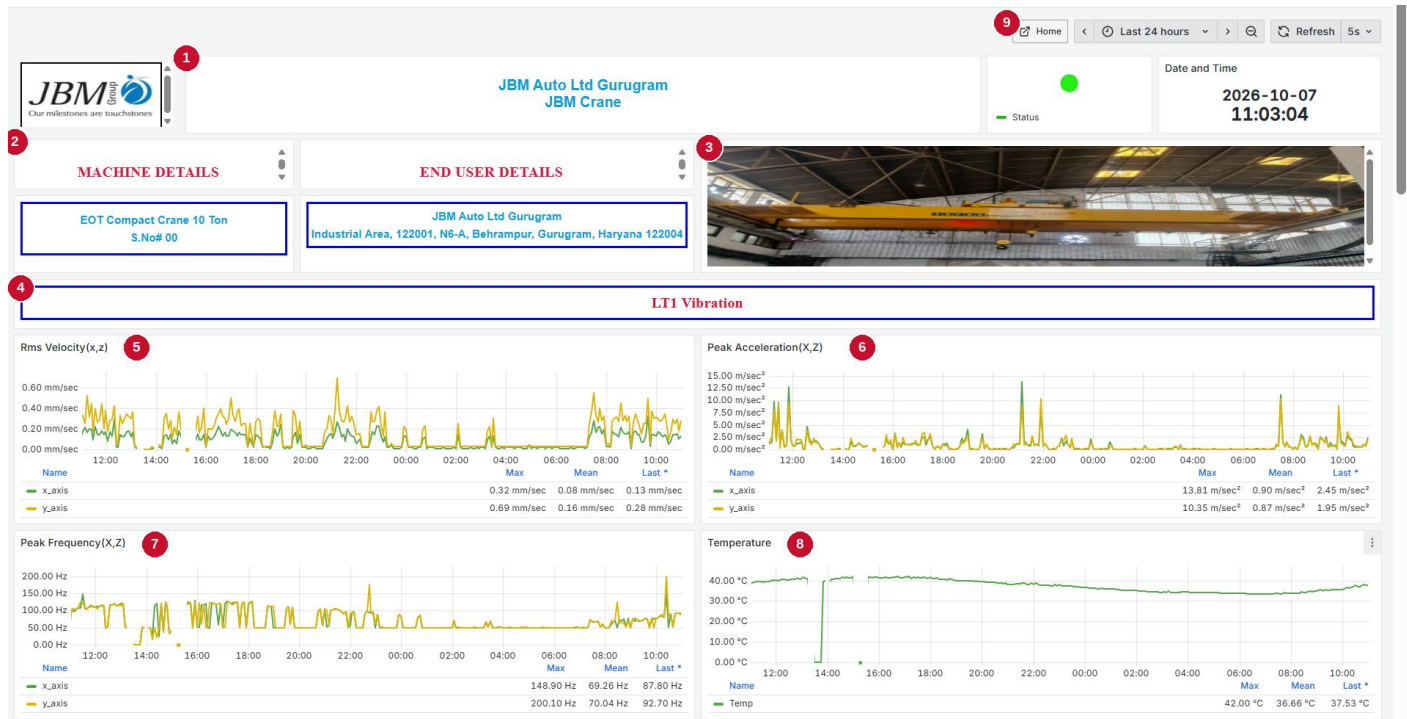


Fig.2: Vibration Insight (LT1)

- **(1) Header:** JBM logo, site name, machine status and current date and time. A green dot means the machine is ON and a red dot means OFF.
- **(2) Machine Details and End User Details:** Crane type, capacity, serial number and the customer address.
- **(3) Crane photo.**
- **(4) LT1 Vibration:** Section of the LT1 motor. LT2, CT and MH have the same section (Fig.3).
- **(5) Rms Velocity:** Trend of x-axis and y-axis vibration velocity.
- **(6) Peak Acceleration:** Trend of x-axis and y-axis peak acceleration.
- **(7) Peak Frequency:** Trend of x-axis and y-axis peak frequency.
- **(8) Temperature:** Trend of the motor temperature.
- **(9) Home and time filter:** Home returns to the Home page. The graphs follow the time filter at the top.

Fig.3: Vibration Insight (LT2, CT, MH)

- **(1) LT2 Vibration, (2) CT Vibration, (3) MH Vibration:** Same four graphs as LT1.
- **(4) Panel Temperature and Humidity Trend Analytics:** Trend of panel temperature and humidity.
- **(5) Crane Motion Details:** Average Current for each day. It follows the time filter.



Fig.3: Vibration Insight (LT2, CT, MH)

## 4. Energy Data Page



Fig.4: Energy Data

- **(1) Total Energy Consume:** Energy used (kWh).
- **(2) VOLTAGE (L-L):** Line-to-line voltage (V).
- **(3) Avg. Current:** Average current (A).
- **(4) VOLTAGE (L-N):** Line-to-neutral voltage (V).
- **(5) Frequency:** Supply frequency (Hz).
- **(6) Total Power (R-Y-B):** Total power (W).

- **(7) Energy Consumption Trend:** Trend graph of energy (kWh).
- **(8) Daily Energy Consumption:** Bar graph of daily energy for the last 7 days.
- **(9) to (12) Graphs:** Trend of VOLTAGE (L-L), VOLTAGE (L-N), Average Current and Frequency.
- **(13) Home:** Returns to the Home page.

## 5. Logs Page

| Time                | MH Runtime(min) | CT Runtime(min) | LT Runtime(min) | Idle(min) | Load(Ton) | Oil Level(%) | Energy (Kwh) | Average Current(A) | Voltage_LL(V) | Voltage_LN(V) | Frequency | Emergency Status |
|---------------------|-----------------|-----------------|-----------------|-----------|-----------|--------------|--------------|--------------------|---------------|---------------|-----------|------------------|
| 2026-10-07 10:49:00 | 13.0            | 0               | 0               | 185       |           |              |              |                    |               |               |           | 0                |
| 2026-10-07 10:50:00 | 13.0            | 0               | 0               | 186       | 0.0400    | 93           | 957          | 1.77               | 410           | 237           | 50.1      | 0                |
| 2026-10-07 10:51:00 | 13.0            | 0               | 0               | 187       | 0.0500    | 93           | 900          | 1.70               | 410           | 236           | 50.1      | 0                |
| 2026-10-07 10:52:00 | 13.0            | 0               | 0               | 188       | 0.0500    | 92           | 933          | 1.77               | 408           | 236           | 50.1      | 0                |
| 2026-10-07 10:53:00 | 13.0            | 0               | 0               | 189       | 0.0500    | 92           | 857          | 1.61               | 410           | 237           | 50.1      | 0                |
| 2026-10-07 10:54:00 | 13.0            | 0               | 0               | 190       | 0.0400    | 93           | 156          | 1.23               | 411           | 237           | 50.1      |                  |
| 2026-10-07 10:55:00 | 13.0            | 0               | 0               | 191       | 0.0400    | 92           | 951          | 1.76               | 412           | 238           | 50.1      | 0                |

Fig.5: Logs

- **(1) Time filter:** Selects the time range of the data.
- **(2) Logs table:** Raw data, one row per minute.
- **(3) Download:** Downloads the logs data.
- **(4) Columns:** Time, MH/CT/LT Runtime, Idle, Load, Oil Level, Energy, Average Current, Voltage\_LL, Voltage\_LN, Frequency, Emergency Status.
- **(5) Rows:** One row for each minute.

## 6. Daily Report Page

- **(1) Home and time filter:** Home returns to the Home page. The time filter sets the number of days shown.
- **(2) Daily Crane Report:** Day-wise Runtime, Idle, Energy, Max Load, Avg Current, Max Current, Avg Frequency, Motor Health and Emergency Count.
- **(3) Download:** Downloads the Daily Crane Report.
- **(4) Day:** One row for each day.
- **(5) Motor Health:** Health of MH, LT1, LT2 and CT motors for the day.
- **(6) Emergency Count:** Number of emergency stops in the day.
- **(7) Daily Vibration & Temperature Report:** Day-wise vibration velocity and temperature of LT1, LT2, CT and MH.
- **(8) Download:** Downloads the Daily Vibration & Temperature Report.

- **(9) Scroll bar:** Scroll right to see the remaining columns.

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Home

<Last 2 days>

Refresh

Daily Crane Report2

Download3

| Day                  | Runtime (min) | Idle (min) | Energy (kWh) | Max Load (Ton) | Avg Current (A) | Max Current (A) | Avg Frequency (Hz) | MH Motor Health5 | LT1 Motor Health | LT2 Motor Health | CT Motor Health | Emergency Count6 |
|----------------------|---------------|------------|--------------|----------------|-----------------|-----------------|--------------------|------------------|------------------|------------------|-----------------|------------------|
| 2026-10-05 06:00:004 | 136.40        | 1273.05    |              | 3.98           | 1.66            | 12.19           | 49.93              | Normal           | Normal           | Normal           | Normal          | 0                |
| 2026-10-06 06:00:00  | 270.17        | 593.60     | 8241.69      | 5.17           | 1.61            | 14.75           | 49.91              | Normal           | Normal           | Normal           | Normal          | 0                |
| 2026-10-07 06:00:00  | 15.60         | 196.23     | 3372.19      | 3.88           | 1.60            | 11.57           | 49.94              | Normal           | Normal           | Normal           | Normal          | 0                |

Daily Vibration & Temperature Report7

Download8

| Day                 | LT1 Motor X_RMS_Vel (MAX) | LT1 Motor X_RMS_Vel (Avg) | LT1 Motor Z_RMS_Vel (MAX) | LT1 Motor Z_RMS_Vel (Avg) | LT1 Temp (MAX) | LT1 Temp (Avg) | LT2 Motor X_RMS_Vel (MAX) | LT2 Motor X_RMS_Vel (Avg) | LT2 Motor Z_RMS_Vel (MAX) | LT2 Motor Z_RMS_Vel (Avg) | LT2 Temp (MAX) | LT2 Temp (Avg) | CT Motor X_RMS_Vel (MAX) | CT Motor X_RMS_Vel (Avg) | CT Motor Z_RMS_Vel (MAX) | CT Motor Z_RMS_Vel (Avg) | C (h) |
|---------------------|---------------------------|---------------------------|---------------------------|---------------------------|----------------|----------------|---------------------------|---------------------------|---------------------------|---------------------------|----------------|----------------|--------------------------|--------------------------|--------------------------|--------------------------|-------|
| 2026-10-05 06:00:00 | 0.29                      | 0.02                      | 2.04                      | 0.04                      | 42.63          | 38.18          | 0.33                      | 0.02                      | 0.93                      | 0.04                      | 43.24          | 37.43          | 0.00                     | 0.00                     | 0.00                     | 0.00                     | 0     |
| 2026-10-06 06:00:00 | 0.31                      | 0.02                      | 0.83                      | 0.04                      | 42.00          | 36.65          | 0.28                      | 0.02                      | 0.70                      | 0.04                      | 42.95          | 36.43          | 1.35                     | 0.02                     | 3.03                     | 0.04                     | 4     |
| 2026-10-07 06:00:00 | 0.32                      | 0.03                      | 0.55                      | 0.05                      | 37.92          | 34.34          | 0.43                      | 0.02                      | 0.99                      | 0.04                      | 38.18          | 33.32          | 0.23                     | 0.03                     | 0.49                     | 0.05                     | 4     |

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Fig.6: Daily Report