



# Condition Analysis Report

Period from 27/01/2025 to 04/02/2025

## 1. Executive Summary

This document reports the analysis of vibration data performed upon the assets of [Company Name]. The main goal of this report is to assess the assets' conditions in regards to their vibration levels and signatures, as well as to recommend correspondent maintenance actions. The data collected in this report concerns the period from 12/15/2024 until 01/15/2025.

## 2. Summary of the [Period]

- 5 ativos com níveis de vibração entre 3 e 5 ([percentage%] [more/less] than last [period])
- 3 new assets with symptoms (30% less than last [period])
- 7 ativos tiveram seus níveis de vibração normalizados (20% do total de ativos que estavam

## 3. Assets with Abnormal Vibration

The ten most critical assets identified are described in the tables below. The sequence is classified by the most critical Parent Assets. It presents a recommended order of action for maintenance technicians.

### F-8 - Conveyor

Asset / Component	Symptoms	Diagnosis	Criticality
<a href="#">Motor Inboard</a> <span style="color: blue;">⊕ 1</span>	Peaks in BPFO	Structural looseness	5 - Emergency
<strong>Overview and Recommendations</strong>			
A description of the General Condition and Symptoms of the Asset, if there is a tendency of aggravation in its vibration levels and the comparative analysis with similar assets. Conclusion with recommended actions.			

### CAROUSEL GEAR-MOTOR PET- 162

Asset / Component	Symptoms	Diagnosis	Criticality
<a href="#">Motor Drive End</a> <span style="color: blue;">⊕ 1</span>	“Carpet” at high frequency	Distributed Wear	5 - Emergency
<a href="#">Motor Non-Drive End</a> <span style="color: blue;">⊕ 1</span>	1x RPM harmonics	Possible unbalance	4 - Critical
<a href="#">Reducer</a>	No symptoms detected	-	-
<strong>Overview and Recommendations</strong>			
A description of the General Condition and Symptoms of the Asset, if there is a tendency of aggravation in its vibration levels and the comparative analysis with similar assets. Conclusion with recommended actions.			

### BC-16 - (SL 2 boom) Conveyor / Gearbox

Asset / Component	Symptoms	Diagnosis	Criticality
<a href="#">Input Shaft</a>	No symptoms detected	-	-
<a href="#">Intermediary Shaft</a> <span style="color: blue;">⊕ 1</span>	1x RPM harmonics	Possible unbalance	4 - Critical
<a href="#">Output Shaft DE</a>	No symptoms detected	-	-
<a href="#">Output Shaft NDE</a>	No symptoms detected	-	-
<strong>Overview and Recommendations</strong>			
A description of the General Condition and Symptoms of the Asset, if there is a tendency of aggravation in its vibration levels and the comparative analysis with similar assets. Conclusion with recommended actions.			

**F-8 - Conveyor**

Asset / Component	Symptoms	Diagnosis	Criticality
<a href="#">Motor Inboard</a>  1	Peaks in BPFO	Potential structural looseness	3 - High

**Overview and Recommendations**

A description of the General Condition and Symptoms of the Asset, if there is a tendency of aggravation in its vibration levels and the comparative analysis with similar assets. Conclusion with recommended actions.

**F-8 - Conveyor**

Asset / Component	Symptoms	Diagnosis	Criticality
<a href="#">Motor Inboard</a>  1	Peaks in BPFO	Potential structural looseness	3 - High

**Overview and Recommendations**

A description of the General Condition and Symptoms of the Asset, if there is a tendency of aggravation in its vibration levels and the comparative analysis with similar assets. Conclusion with recommended actions.

**CAROUSEL GEAR-MOTOR PET- 162**

Asset / Component	Symptoms	Diagnosis	Criticality
<a href="#">Motor Drive End</a>  1	"Carpet" at high frequency	Distributed Wear	3 - High
<a href="#">Motor Non-Drive End</a>  1	1x RPM harmonics	Possible unbalance	2 - Moderate
<a href="#">Reducer</a>	No symptoms detected	-	-

**Overview and Recommendations**

A description of the General Condition and Symptoms of the Asset, if there is a tendency of aggravation in its vibration levels and the comparative analysis with similar assets. Conclusion with recommended actions.

**F-8 - Conveyor**

Asset / Component	Symptoms	Diagnosis	Criticality
<a href="#">Motor Inboard</a>  1	Peaks in BPFO	Potential structural looseness	2 - Moderate

**Overview and Recommendations**

A description of the General Condition and Symptoms of the Asset, if there is a tendency of aggravation in its vibration levels and the comparative analysis with similar assets. Conclusion with recommended actions.

**CAROUSEL GEAR-MOTOR PET- 162**

Asset / Component	Symptoms	Diagnosis	Criticality
<a href="#">Motor Drive End</a>  1	"Carpet" at high frequency	Distributed Wear	2 - Moderate
<a href="#">Motor Non-Drive End</a>  1	1x RPM harmonics	Possible unbalance	1 - Low
<a href="#">Reducer</a>	No symptoms detected	-	-

**Overview and Recommendations**

A description of the General Condition and Symptoms of the Asset, if there is a tendency of aggravation in its vibration levels and the comparative analysis with similar assets. Conclusion with recommended actions.

**F-8 - Conveyor**

Asset / Component	Symptoms	Diagnosis	Criticality
<a href="#">Motor Inboard</a>  1	Peaks in BPFO	Potential structural looseness	1 - Low

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A description of the General Condition and Symptoms of the Asset, if there is a tendency of aggravation in its vibration levels and the comparative analysis with similar assets. Conclusion with recommended actions.

F-8 - Conveyor			
Asset / Component	Symptoms	Diagnosis	Criticality
<a href="#">Motor Inboard</a>	 1 Peaks in BPFO	Potential structural looseness	1 - Low
Overview and Recommendations			
A description of the General Condition and Symptoms of the Asset, if there is a tendency of aggravation in its vibration levels and the comparative analysis with similar assets. Conclusion with recommended actions.			

Criticality Levels	
Level	Description
1 - Low	Mild and sporadic symptoms. Equipment performance is not affected.
2 - Moderate	Noticeable symptoms with no compromise in operation. May indicate initial wear.
3 - High	Frequent and visible symptoms. Impact on performance may be noticeable.
4 - Critical	Severe and constant symptoms, possibly compromising machine functionality.
5 - Emergency	Imminent or already occurred failure. The equipment should not be operated.

## 4. Conclusion and Recommendations

For the present report, immediate inspection of the critical assets presented on Table 1 is recommended, in order to avoid failures of these machines, given the analysis provided above. The table is presented in a criticality sorted way, so that the highest level of vibration is to be assessed first, given their more imminent tendency towards failure.

Furthermore, due to the lack of information provided to Tractian's platform regarding the assets specifications, for components such as gears, bearings and pulleys, Tractian's system is being capped by the lack of critical specifications.

With these pieces of information properly set up in the platform, automatic Insights provided by AI will be available, providing better, swifter and more contextualized results for analysis, diagnostics and prognostics, individually per asset. These insights will, then, facilitate the field technicians' maintenance routines, leading to extended remaining useful life of the assets, and avoiding failure.

Tractian is available to clarify any points stated in this report, and is able to help gather the aforementioned information.

# TRACTIAN

**BRASIL**  
Av. Jurucê, 302. Moema, São Paulo, SP

**EUA**  
201 17th Street NW, Atlanta, GA 30363

**MÉXICO**  
Córdoba 23, Cuauhtémoc, Ciudad de México, CDMX

LOCATION / CAROUSEL GEAR-MOTOR PET- 162	Vibration levels	Aggravation
Trend of worsening symptoms compared to the last week (or period). Explanation of how the asset is vibrating in relation to its peers (Z Score) and itself (vibration magnitudes).		
Sub asset / Sensor	Symptoms	Criticality
(Sensor ID) MOTOR LA	1x RPM subharmonics	High
(Sensor ID) MOTOR LOA	Peaks in BPFO	Medium
(Sensor ID) REDUTOR	No symptoms detected	-

## 1. Executive Summary

This report presents the assets of the [Company] units that have recorded changes in vibration levels, as well as those that have received negative feedback for failures or have been classified as a change in operation. The aim is to highlight situations of worsening, persistence or normalization of the condition following notification of anomalies by TRACTIAN. The data analyzed covers the period from 27/01/2025 to 04/02/2025.

## 2. Summary of the week

- 12% increase in the number of assets in a worsening situation
- 6 assets that showed no improvement or worsened after intervention
- 3 new assets with symptoms (30% less than last week)

## 3. Notified Assets with Abnormal Vibration

### LOCATION / CAROUSEL GEAR-MOTOR PET- 162

Explanation of how the asset is vibrating in relation to its peers (Z Score) and itself (vibration magnitudes).

Sub asset / Sensor	Symptoms	Criticality
(Sensor ID) MOTOR LA	⌚ 1   1x RPM subharmonics	High
(Sensor ID) MOTOR LOA	⌚ 1   Peaks in BPFO	Medium
(Sensor ID) REDUTOR	⌚ 1   1x RPM subharmonics	Low

### LOCATION / CAROUSEL GEAR-MOTOR PET- 162

### Vibration levels

### Aggravation

Sub asset / Sensor	Symptoms	Criticality
(Sensor ID) MOTOR LA	⌚ 1   1x RPM subharmonics	High
(Sensor ID) MOTOR LOA	⌚ 1   Peaks in BPFO	Medium
(Sensor ID) REDUTOR	No symptoms detected	-

### LOCATION / CAROUSEL GEAR-MOTOR PET- 162

Trend of worsening symptoms compared to the last week (or period). Explanation of how the asset is vibrating in relation to its peers (Z Score) and itself (vibration magnitudes).

Sub asset / Sensor	Symptoms	Diagnosis	Criticality
(Sensor ID) <a href="#">MOTOR LA</a>	⌚ 1   "Carpet" at high frequency	Distributed Wear	High
(Sensor ID) <a href="#">MOTOR LOA</a>	⌚ 1   1x RPM harmonics	Possible unbalance	Medium
(Sensor ID) <a href="#">REDUTOR</a>	No symptoms detected	-	-

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BC-16 - (SL 2 boom) Conveyor / Gearbox				
Asset / Component	Symptoms	Diagnosis	Criticality	
<a href="#">Input Shaft</a>	No symptoms detected	-	-	
<a href="#">Intermediary Shaft</a> <span style="color: blue;">⊕ 1</span>	1x RPM harmonics	Possible unbalance	High	
<a href="#">Output Shaft DE</a>	No symptoms detected	-	-	
<a href="#">Output Shaft NDE</a>	No symptoms detected	-	-	

**Overview and Recommendations**

A description of the General Condition and Symptoms of the Asset, if there is a tendency of aggravation in its vibration levels and the comparative analysis with similar assets. Conclusion with recommended actions.

F-8 - Conveyor				
Asset / Component	Symptoms	Diagnosis	Criticality	
<a href="#">Motor Inboard</a> <span style="color: blue;">⊕ 1</span>	Peaks in BPFO	Potential structural looseness	Moderate	

**Overview and Recommendations**

A description of the General Condition and Symptoms of the Asset, if there is a tendency of aggravation in its vibration levels and the comparative analysis with similar assets. Conclusion with recommended actions.

CAROUSEL GEAR-MOTOR PET- 162				
Asset / Component	Symptoms	Diagnosis	Criticality	
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<a href="#">Reducer</a>	No symptoms detected	-	-	

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**Overview and Recommendations**

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**Legendas**

- Níveis de Vibração
  - Normalizado - A máquina retornou à vibração normal.
  - Persistência - A vibração alterada se manteve sem piora nem melhora significativa.
  - Agravamento - A vibração piorou, indicando progressão da falha.

## 4. Conclusion and Recommendations

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