

VBOX MINING

Cost-effective GPS solutions to reduce tyre, fuel and maintenance costs for mining vehicles.

VBOX MINING Solutions help users on mine sites around the world to measure precise vehicle movements and report on site operations. This helps solve issues with: low tyre life, low component life, underutilised equipment, driver behaviour and identifying root causes during incident investigations.

VBOX VIDEO HD2

VBOX is a high accuracy GPS data logger that can be fitted to any vehicle. The GPS data is synchronised with video footage captured on site using a **VBOX VIDEO HD2**.

With a ring buffer, the **VBOX VIDEO HD2** will always keep the most recent GPS data and video footage available for analysis – like a “black box” flight recorder.



VIDEO VBOX PRO

RACELOGIC offers a **VIDEO VBOX PRO** upgraded with heavy duty protection (IP67) designed for mining users. The Rugged **VIDEO VBOX PRO** includes a modified Pelican case capable of housing:

- **VIDEO VBOX PRO**
- Four heavy duty cameras with stainless steel enclosures
- Inertial Measurement Unit
- Camera extension cables and accessories



VBOX
RACELOGIC

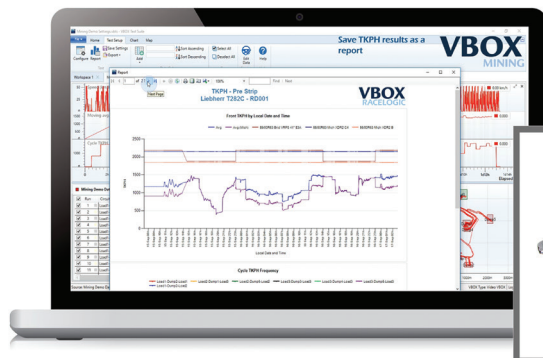
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Position Index



INVESTIGATE CYCLES AND CIRCUITS ON-SITE

TKPH SOFTWARE



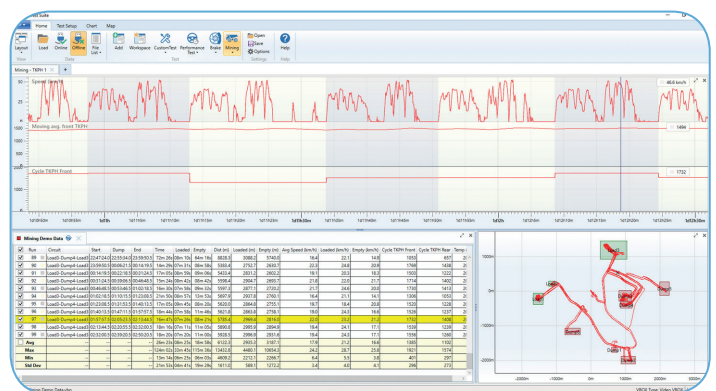
VBOX Process

1. Fit **VBOX** to any vehicle to record video footage and high accuracy GPS data
2. Analyse the latest **VBOX** data when an event of interest occurs, such as a significant change in operations or an incident that requires investigation
3. Realise benefits by reducing maintenance and operational costs whilst improving safety and productivity

VBOX Software for Mining Users

Generate cycle results with simple inputs

- Input load/dump locations and vehicle data
- Automatically calculate cycle TKPH for each cycle
- View loaded/unloaded performance for each cycle



TKPH Report

Summarise and share results by generating a TKPH report

- Measure operational site TKPH against rated tyre TKPH
- TKPH corrections applied from tyre manufacturer specifications
- Compare cycle TKPH between multiple circuits

| Summary by Circuit | | | | | | | | |
|--------------------|----------------------------------|-------------------------------|----------------------------------|----------------------------|----------------------------|--------------------|--------------------|------------------|
| Circuit | Average Round Trip Distance (km) | Average Cycle Time (hh:mm:ss) | Total Time on Circuit (hh:mm:ss) | Average Cycle Speed (km/h) | Maximum Cycle Speed (km/h) | Average Cycle TKPH | Maximum Cycle TKPH | Number of Cycles |
| Load1-Dump2-Load1 | 8.47 | 00:31:32 | 07:53:08 | 18.39 | 23.2 | 1510 | 1928 | 15 |
| Load1-Dump2-Load2 | 8 | 02:04:02 | 02:04:02 | 6.39 | 6.39 | 408 | 408 | 1 |
| Load2-Dump3-Load3 | 16.97 | 02:06:10 | 02:06:10 | 10.5 | 10.5 | 1003 | 1003 | 1 |
| Load2-Dump6-Load2 | 5.22 | 00:26:14 | 00:52:29 | 12.9 | 12.93 | 1020 | 1061 | 2 |
| Load3-Dump3-Load3 | 5.41 | 00:22:11 | 19:58:20 | 18.24 | 23.64 | 1444 | 1872 | 54 |
| Load3-Dump4-Load3 | 6.06 | 00:22:42 | 07:56:45 | 19.19 | 24.21 | 1553 | 1980 | 21 |
| Load3-Dump5-Load3 | 6.05 | 00:34:48 | 02:19:12 | 14.78 | 19.55 | 1123 | 1519 | 4 |
| Avg | 6.26 | 00:26:55 | 05:44:50 | 15.02 | 24.21 | 1441 | 1988 | 98 |

| Summary by Inputs | | | | | |
|-----------------------|-----------------------|----------------------------|---------------------------|---------------------------|------------|
| Vehicle | Shift Start Times | | | Shift Temperatures | |
| Vehicle ID | RD001 | Day Shift | 07:00 AM | Day Shift | 38.00 (°C) |
| Vehicle Specification | Liebherr T282C | Night Shift | 07:00 PM | Night Shift | 20.00 (°C) |
| Vehicle Type | Haul Truck | Time Zone | E Australia Standard Time | | |
| Fleet | Pre Ship | | | | |
| Weight/Load | | | | | |
| Empty Vehicle Weight | 240 tonnes | Empty Weight Distribution | | Front - 50% Rear - 50% | |
| Payload | 360 tonnes | Loaded Weight Distribution | | Front - 34% Rear - 66% | |
| Number of wheels | Front - 2 Rear - 4 | Average Over | | 4.00h | |



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