

Undercarriage Management Software by TrackTreads

.....the right software for your Undercarriage Hardware

1. Capability Overview

TrackTreads P/L operating out of Australia has a 20-year history providing software for managing Heavy Earthmoving Equipment worldwide.

The Cloud based Undercarriage Management system uses normal mobile devices to collect field inspection data which syncs to the cloud system for data interpretation and further analysis. The fundamental drive of the system is to provide tools for customers to be able to measure and manage their undercarriage from cradle to grave, thus achieving full potential from their wear material.

The TrackTreads team provide the following services to support the software:

1.1. Software

The Undercarriage and GET Management software is developed and supported in-house allowing changes and improvements to be made in a continuous process. The software comes with all OEM machine models and relevant components with wear limits for the different tools for measuring.

1.2. Training

Training for users can be provided online via electronic meeting and screen share or onsite by our software and undercarriage experts. Training covers the use of the software along with How to measure components and undercarriage management principles

1.3. Consulting Services

Customers may need assistance for Site **specific Software functionality** or integration with their in-house ERP systems. The TrackTreads team can assist with programming these tasks.

1.4. Measuring Kits

Measuring kits are also available. The kits are made up of a number of components and customers purchasing the kits can purchase key individual items or the entire kit. A separate kit is also available with the tools for mining shovels.

Standard tool kit for Dozers

























Mining Shovel Measuring Tools



**Inspection
Kits
Available**

1.5. Families and Models Covered

OEM	Dozers	Drills	Hydraulic Shovels	Excavators	Track Loaders	Rope Shovels	Pipelayers
Cat							
Komatsu							
Liebherr							
Hitachi							
John Deere							
Volvo							
Atlas Copco							
Sandvik							

2. Software Functionality & Capability

TrackTreads Undercarriage Inspection Management Software consists of a **mobile App** (Android or IOS) to collect Inspection data which then sync's with a **cloud-based** solution to manage the inspection results and history

Undercarriage Inspectors collect field inspection data remotely



Data is synced with the cloud Based Database

Inspection Data can be viewed & analysed by **Undercarriage Experts**



Customer can

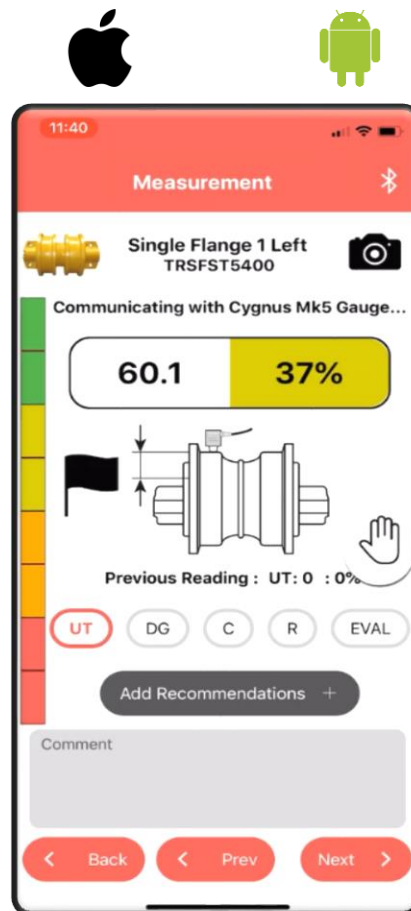
1. Review inspection results
2. Access historical Inspections
3. Review recommended Actions
4. Input Actions/Events completed



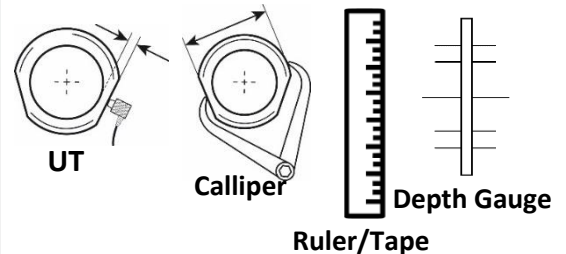
Field Inspection Data Collection

1. Ultrasonic Tool and Smartphone
2. Operates remotely
3. Bluetooth link with Ultrasonic Tool
4. Records: -

- Jobsite Underfoot Conditions
- Track Sag
- Track Tension
- Scalloping



- Measurements with Tools

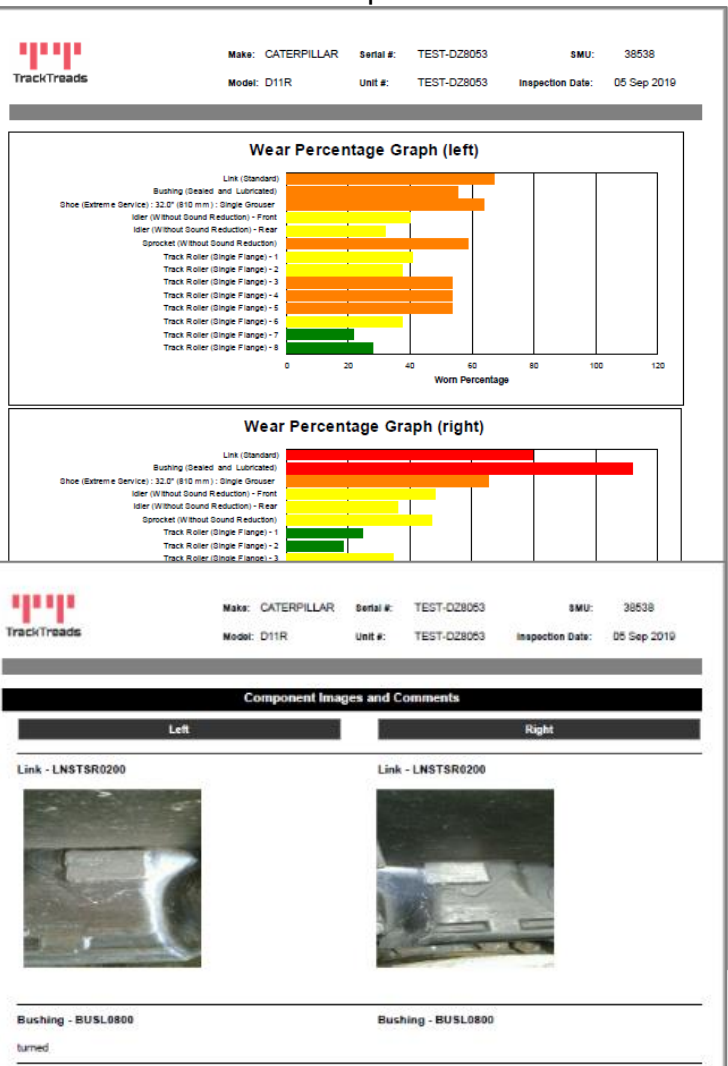
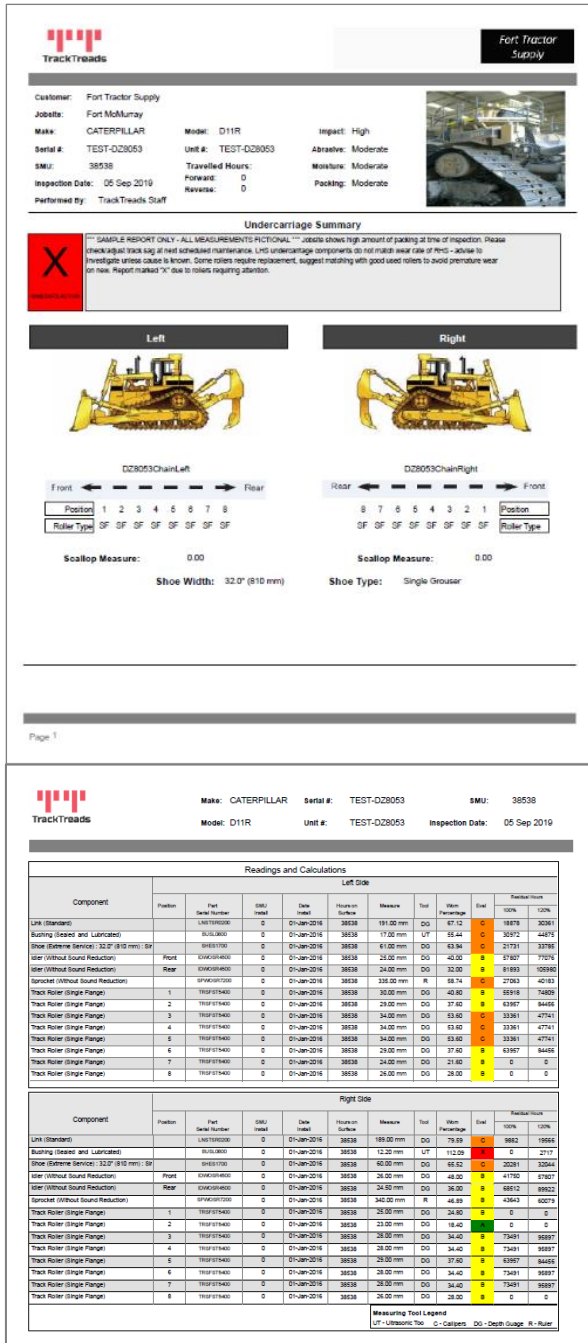


- % Worn from OEM Wear Specs.
- Displays previous inspection data
- Images
- Comments
- Repair Recommendation:



PDF Reports for each Inspection

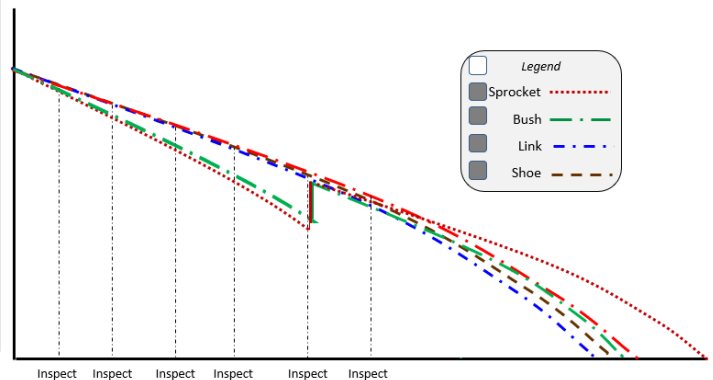
- All inspection data summarised
- Email to all invested parties



Full History of Inspections

- View Historical inspections either
 - Tabular or Graphical
- View performance over life of machine
- Performance measured in Hours & Cost/Hr

DATE	14-Jun-2021	28-Jun-2021	07-Jul-2021	17-Jul-2021	14-Aug-2021	25-Sep-2021
SMU	21395	21899	19889	19441	19440	16395
Propel/Hr	1430	1439	1354	8	1274	1947
Propel/%	6.7%	6.9%	6.9%	0.6%	6.9%	7.5%
Inspector	Dele Magalhães	Tam Hall	Tam Hall	TrackTreads Staff	Sam Anwar Inad	Sam Anwar Inad
Type	1450hr_Fit(Passive)	2850hr_Fit(Passive)	1450hr_Fit(Passive)	Repair or Replace Inspection	2550hr_Fit(Passive)	16,000hr (Mid-Dr)
Residual Life	31897	35554	29440	26713	25864	22635
Crawler Belt (CM)	21395	21899	19889	19441	19440	16395
Left Side U/C (Weighted % /Yrs)	69.0%	69.0%	67.0%	66.0%	66.0%	66.0%
→ Link (Crawler Shoe, R251730(CM))	71.0%	70.0%	71.0%	70.4%	70.4%	69.7%
→ Idler (Front Idler, Bronze Bushing 948489(CM)) Front	5.4%	5.4%	5.4%	5.4%	5.4%	5.4%
→ R3 Riser (Riser Wire, Bronze Bushing 854757(CM)) Rear	33.0%	33.0%	33.0%	30.4%	30.4%	30.4%
→ Sprocket (Rear, Bronze Bushing 854485(CM))	35.0%	36.0%	36.0%	31.0%	31.0%	31.0%
→ Crawler Frame Guide (Slider #1, R177397(CM)) 1	36.0%	36.0%	25.0%	70.4%	70.4%	70.4%
→ Crawler Frame Guide (Slider #2, R177397(CM)) 2	21.0%	21.0%	15.0%	6.0%	6.0%	6.0%
→ Crawler Frame Guide (Slider #3, R177397(CM)) 3	21.0%	21.0%	15.0%	6.0%	6.0%	6.0%
→ Crawler Frame Guide (Slider #4, R177397(CM)) 4	21.0%	21.0%	15.0%	6.0%	6.0%	6.0%
→ Track Roller (Lower Roller, Bronze Bushing 86709(CM)) 1	16.0%	6.0%	6.0%	16.4%	16.4%	16.4%
→ Track Roller (Lower Roller, Bronze Bushing 86709(CM)) 2	16.0%	6.0%	6.0%	16.4%	16.4%	16.4%



TrackTreads Team

help@tracktreads.com

+61 411 536 483

www.tracktreads.com



Chain & Frame Management

- Chain & Frame serial numbers tracked
- Search location & Condition
- Exchange between machines & Inventory
- Retain history of all events on chain to calculate cost per hour



Forecast Future Inventory Requirements

- System forecasts future requirements
- Budgets for the Entire Fleet, 6 or 12 months
- Provides Plan for correct stock holding
- Provides Manufacturing Requirements
- Consignment Stocks



End of Life Inspection

- Automated Final inspection when components Replaced
- Based on average wear rate over last inspections
- Calculate value lost – material left behind
- View component performance over entire life



Data Library

- Each Inspection records wear rate performance statistics
- Average wear rates scenarios provide benchmarks
- Compare performance across seasons, component types & brands
- Use average wear rates for forecasting.
- Hours (or Distance)/mm wear material, Hours (or Distance)/% wear



Forecast Work Schedule

- Complete listing by week display machines and tasks to be completed
- Inspection identified recommendations create future work schedule aligned to PM's
- Forecast % wear from **Data Library** at next PM and following PM intervention
- Work Orders can be raised automatically to complete scheduled work
- Completed tasks automatically updates undercarriage status

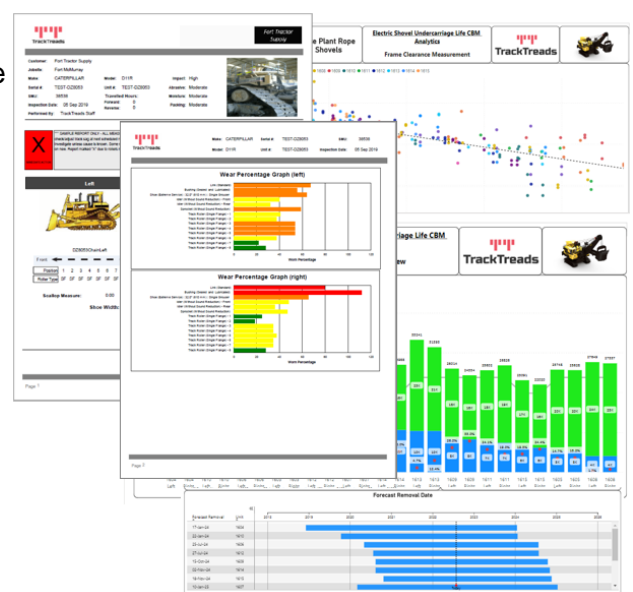


Dashboards and Machine Detail

- Summary of fleet on a single Dashboard
- Multiple Views of the fleet
- Highlights problem areas and performance
- Drill to the details
- Cloud based allows access anywhere

Reporting

- **Inspection Detailed Report:** –
 - Readings, % worn, Hours on surface, Residual Life
- **Machine Performance Report:** –
 - Comparison with benchmark, cost/hour, value lost
- **Fleet Performance Report:** -
 - Fleet overall condition
 - Fleet inspections due
 - Repair & replacement tasks due
 - Component Life performance against benchmarks
 - Average value lost



Standard API's

- API's allow data to be shared between the systems automatically saving time and labour
- Standard API's are available
- Special API's can be added



Key Attributes and Benefits

- View **entire Fleet** Condition on single dashboard, all data in one location
- **End to end system** to measure and manage undercarriage
- **Mixed Fleet** covering all makes and models.
- **Manage** all sizes of tracked machine, from small dozers to rope shovels
- View **full history of inspections** and compare performance both **tabular** and **graphically**
- **Residual life forecast** for each component is generated from each inspection
- **Corrective Actions** can be planned by reliability specialists to achieve full system life.
- **Easy to use** for inspectors, interpreters, and end users
- Data collection is **quick** and **efficient** improving productivity of personnel
- **Forecast future replacements** by month, quarter and annually
- **Review past performance** in both hours and cost per hour
- **Component performance comparison** across different brands
- **Move data** seamlessly to and from the system using standard **API's**