

“TrackTreads Asset Management System”

By

smartDataTM
ENTERPRISES
Scaling Expectations

CMMI Dev/3 Organization



Project Name

TrackTreads Asset Management System

Case Study Overview

This case study explores how TrackTreads helped fleet operators in the mining and heavy equipment sectors overcome challenges in managing undercarriage wear and maintenance. By implementing a digital solution for field inspections and predictive analytics, TrackTreads provided clients with the ability to track wear in real-time, forecast repairs, and optimize equipment performance. The case study outlines the problems faced by clients, the solution TrackTreads delivered, the system's core features, and how it addressed key challenges, leading to improved operational efficiency and cost savings.

Problem Statement

Fleet owners and operators of tracked machinery face challenges in tracking undercarriage wear and maintenance needs, often relying on time-consuming manual inspections and disparate data systems. This leads to inefficiencies, inaccurate forecasting of maintenance needs, and unexpected equipment failures, increasing operational costs and downtime.

Solution

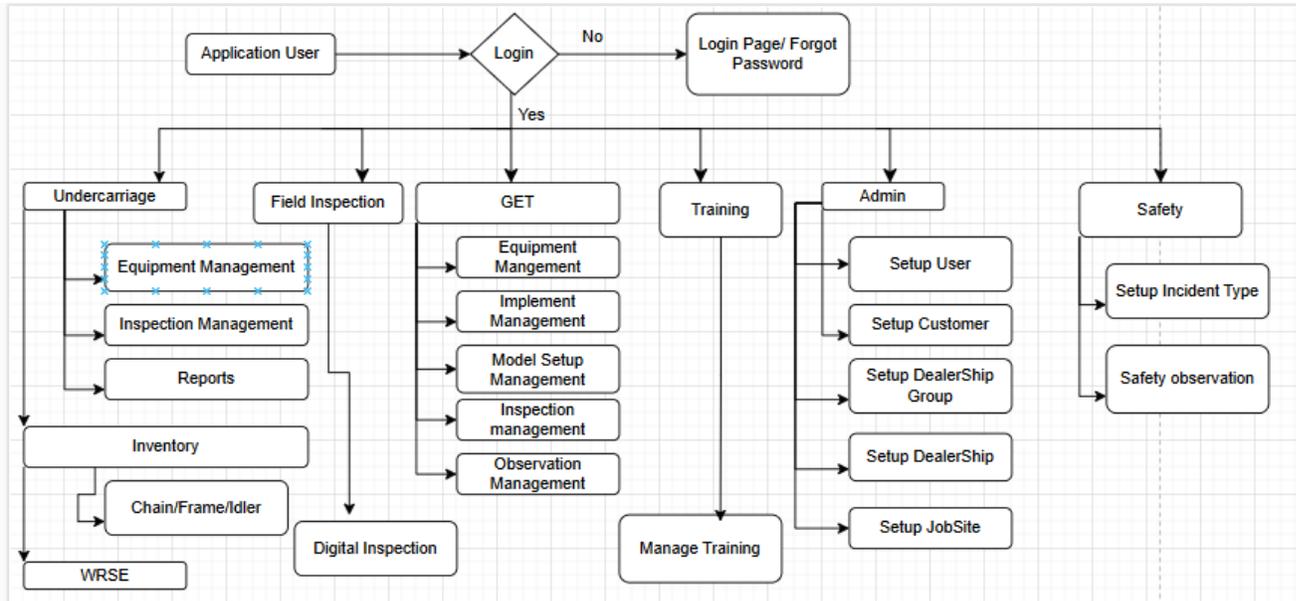
TrackTreads offers a comprehensive SaaS-based platform for undercarriage management, providing a mobile app for field inspections and a web-based portal for data analysis and reporting. The system supports all types of tracked machinery, including rope shovels, and offers predictive insights to help manage component wear, forecast replacements, and track cost-per-hour usage.

Core Features/Advantages

- Mobile Inspection Tools: Field measurements, images, and comments collected through mobile devices (iOS, Android, Microsoft), with integration for ultrasonic tools.
- Real-time Syncing: Data is automatically synced to the web portal for supervisor analysis.
- Custom Reporting: Users can generate real-time undercarriage condition reports on-site, helping customers act quickly.
- Predictive Maintenance: TrackTreads' analytics help forecast component wear, set custom inspection limits, and compare component performance across fleets.

- Comprehensive Data History: Complete inspection history allows for thorough tracking of repairs, replacements, and cost analysis over time.

Master Flow



Challenges & Solutions

Challenges:

- Resistance to digital adoption: Field operators and technicians are often slow to adopt digital tools, preferring manual processes.
- Data Integration Issues: Many clients have legacy systems in place, making integration with new software complex.

Solutions:

- Extensive Training: TrackTreads offers comprehensive onboarding and ongoing support to ensure a smooth transition to their digital inspection tools.
- API & Integration Support: Seamless integration with existing enterprise resource planning (ERP) and maintenance systems through custom APIs.

Screenshots

Undercarriage - Field Inspections - Get & Wear Surfaces - CRC - Training - Admin - TAdmin - Safety - My Account - tracktreads

Equipment Details - In Use

98%

Customer: BMA
Job Site: Maggie

Serial Number: JB17FebE2E02

Unit Number: DO20147-NEW

Additional Unit Number

Last Inspection Date: 02/Sep/2024

Next Inspection Date: 15/Oct/2024

Meter Reading: 6500

Life to Date (LTD): 6500

Make: CATERPILLAR

Model: D11R

Family: Dozer -Elevated Sprocket

Setup Date: 17/Nov/2023

Tasks

-
-
-
-
-
-
-

Inspection Planning

SMU/HM: 7000
15/Oct/2024

Inspection History

X
 SMU/HM: 6500
02/Sep/2024

A
 SMU/HM: 6200
15/Feb/2024

X
 SMU/HM: 5200
01/Jan/2024

OVERVIEW INSPECTION HISTORY GRAPH ACTION HISTORY

Display Columns for: CMU Res. Life 100% Res. Life 120% Install Date

Left Side Chain - JB17FebE2E02ChainLeft

Worn%	Component	Pos	Work Order#	Brand	Budget	B/Turn%	CMU	Res. Life 100%	Res. Life 120%	Projected 100%	Projected 120%	Difference	Purchase Cost	Repairs Cost
98%	Link (Standard)			CATERPILLAR	12000		1800	38	406	1838	2206	10162	\$0.00	\$0.00
82%	Bushing (Sealed and Lubricate...)			CATERPILLAR	12000	9000 / 75%	1800	392	830	2192	2630	9808	\$0.00	\$0.00
62%	Shoe (Extreme Service) - Size...			CATERPILLAR	12000		1800	1119	1703	2919	3503	9081	\$0.00	\$0.00

X Search [Test One](#) [Create Favourite](#)

Dealer: _____

Family: _____

Equipment Serial/Unit No: _____

Customer: _____

Make: _____

Serial/Unit Search: _____

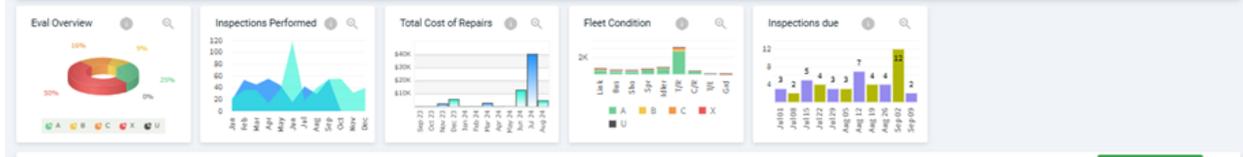
Job Site: _____

Model: _____

Inspector: _____

Evaluation (Worst Side) A B C X Equipment not in Use

[Reset](#) [Search](#)



FLEET OVERVIEW COMPONENT OVERVIEW WEAR RATE OVERVIEW [Setup New Equipment](#)

Eval (A)	Eval (B)	Therm L/R	Customer	Site	Inspector	Serial No.	Unit No.	Additional Unit No.	Make	Model	Family	SMU/Hourmeter	LTD	Propel %	Avg Usage	Residual Hrs	Replacement Date	Last Inspect Date	Next Inspect Date(SMU)
95%	-%		BMA	Arndevd	TrackTreads Staff	EZE_8_9_9_a...	899apkon1...		CATERPILLAR	D11T	Dozer -Elevated Sprocket	1000	1000	0.0	N/A	-1000	No Calc.	05 Sep 2024	11 Oct 2024/1500
126%	-%		QA Customer	QA Jobsite	TrackTreads Staff	EZE_8_9_9...	899_los_off...		CATERPILLAR	D11T	Dozer -Elevated Sprocket	1500	1500	-	N/A	0	No Calc.	05 Sep 2024	18 Oct 2024/2000
52%	500%		QA Customer	QA Jobsite	TrackTreads Staff	EZE_8_9_9_a...	899apklott1...		CATERPILLAR	D11T	Dozer -Elevated Sprocket	1500	1500	-	N/A	0	No Calc.	05 Sep 2024	18 Oct 2024/2000
135%	-%		BMA	Daunia Mine	TrackTreads Staff	EZE_8_9_9...	899iosonlin...	EZE_899ios...	CATERPILLAR	D11T	Dozer -Elevated Sprocket	2700	2700	-	50.0	0	05 Sep 2024	05 Sep 2024	07 Oct 2024/2876



Undercarriage ▾ Field Inspections ▾ Get & Wear Surfaces ▾ CRC ▾ Training ▾ Admin ▾ TAdmin ▾ Safety ▾ My Account ▾ tracktreads

Dashboard / New Inspection



Serial Number: **JB17FebE2E02** Unit Number: **DOZ0147-NEW** Change Equipment

Customer: BMA Job Site: Maggie Meter Reading (SMU/Hourmeter): 1900 Life to Date (LTD): 1900 Make: CATERPILLAR Model: D11R Family: Dozer -Elevated Sprocket

1 General Information 2 Left Side Components 3 Right Side Components 4 Additional Observations 5 Review & Save

Equipment Hours

Meter Reading (SMU/Hourmeter) hrs (hrs) Inspection Date (date)

Forward Travel hrs hrs Reverse Travel hrs hrs

Forward Travel km Reverse Travel km

Total Dist: 0 km

Overall Notes

Inspection Notes

Job Site Notes

Underfoot Conditions Observations

Save

Undercarriage ▾ Field Inspections ▾ Get & Wear Surfaces ▾ CRC ▾ Training ▾ Admin ▾ TAdmin ▾ Safety ▾ My Account ▾ tracktreads

Dashboard / New Inspection



Serial Number: **JB17FebE2E02** Unit Number: **DOZ0147-NEW** Change Equipment

Customer: BMA Job Site: Maggie Meter Reading (SMU/Hourmeter): 6500 Life to Date (LTD): 6500 Make: CATERPILLAR Model: D11R Family: Dozer -Elevated Sprocket

1 General Information 2 Left Side Components 3 Right Side Components 4 Additional Observations 5 Review & Save

Additional Observation Lists

Title	Answer	Image	Comment	Delete	Add Observations
Equaliser Bar Style	<input type="text"/>	<input type="text"/>	<input type="text"/>	✖	
Equaliser Bar Bore	<input type="text"/>	<input type="text"/>	<input type="text"/>	✖	
Blade Left End Bit	<input type="text"/>	<input type="text"/>	<input type="text"/>	✖	
Blade Cutting Edges Left, Right, Centre	<input type="text"/>	<input type="text"/>	<input type="text"/>	✖	

Warning: You are currently missing the pmReading, ForwardTravelHours, ReverseTravelHours, ForwardTravelKms, ReverseTravelKms, TrackSagLeft, TrackSagRight, DryJointLeft, DryJointRight, CannonBitLeft, CannonBitRight, ScallopLeft, ScallopRight, LinkHoLeft, LinkHoRight, JobSiteNotes, InspectionNotes, measurement.

< Back Next >



Undercarriage ▾ Field Inspections ▾ Get & Wear Surfaces ▾ CRC ▾ Training ▾ Admin ▾ TAdmin ▾ Safety ▾ My Account ▾ tracktreads

Dashboard / Find Inspection / Interpretation



Serial Number
JB17FebE2E02

Unit Number
DOZ0147-NEW

Additional Unit No
CATERPILLAR

Make
D11R

Model
1004244

Inspection Id
1004244

Quote **PDF** **Send Report**

Customer	Meter Reading (SMU/Hourmeter)	Forward Travel	Reverse Travel	Total Dist.	Reverse Dist. %	Inspection Comment	Inspector	Inspection Date
BMA	6500 hrs	0 km	0 km	0 km	0 %		TrackTreads Staff	02/Sep/2024
Job Site	Life to Date (LTD)	Forward	Reverse			JobSite Comment		
Maggie	6500 hrs	0 Hrs	0 Hrs					

Underfoot Conditions

Impact* Low Medium High

Abrasive* Low Medium High

Moisture* Low Medium High

Packing* Low Medium High

Track Sag

L mm

R mm

Cannon Ext.

L mm

R mm

Toe Out

Scallops

L mm

R mm

Straight

Dry Joints

L mm

R mm

of Links

L mm

R mm

Tension Indicator Installed

L Yes No

R Yes No

Thermal Images

L mm

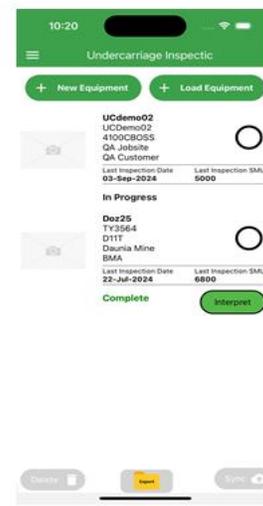
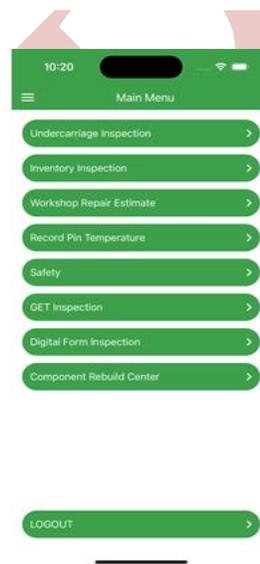
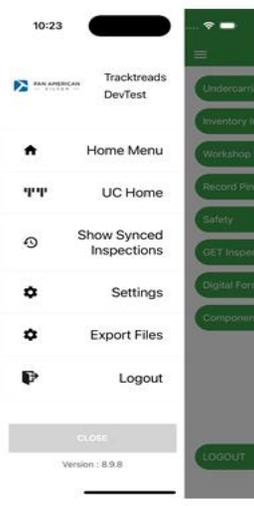
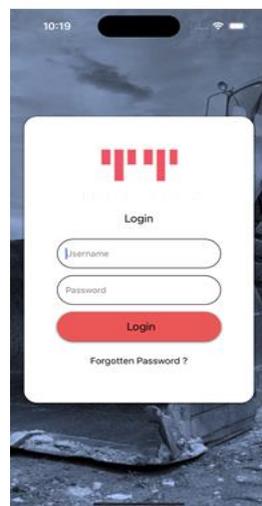
R mm

Interpretation Comment

Quotes & Recommendations

1 Action Date Action SMU

Warning: You are currently missing the pmuReading, ForwardTravelHours, ReverseTravelHours, ForwardTravelKms, ReverseTravelKms, TrackSagLeft, TrackSagRight, DryJointLeft, DryJointRight, CannonExtLeft, CannonExtRight, ScallopsLeft, ScallopsRight, LinkNoLeft, LinkNoRight, JobSiteNotes, InspectionNotes, measurement.



Conclusion

TrackTreads' undercarriage management software provides fleet operators with a cutting-edge solution to reduce downtime, improve maintenance planning, and enhance overall equipment life. By combining mobile inspections with predictive analytics, the system allows companies to make informed, real-time decisions on repairs and replacements, optimizing their asset management strategies.

