SLIDES ONLY
NO SCRIPT PROVIDED

C5 Wire Test Data Ingestion and Power Bi Analysis

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C5 AWTS Data Ingestion & Analysis

- Introduction
  - 8 Years in USAF Data Analysis
    - AFLCMC/HB Cost Analysis
    - Reliability Data Analysis
      - C5
      - U2
      - A/H/M C130J
      - JSTARS
    - Data Engineering, Web Development, Network Engineering

KIHOMAC

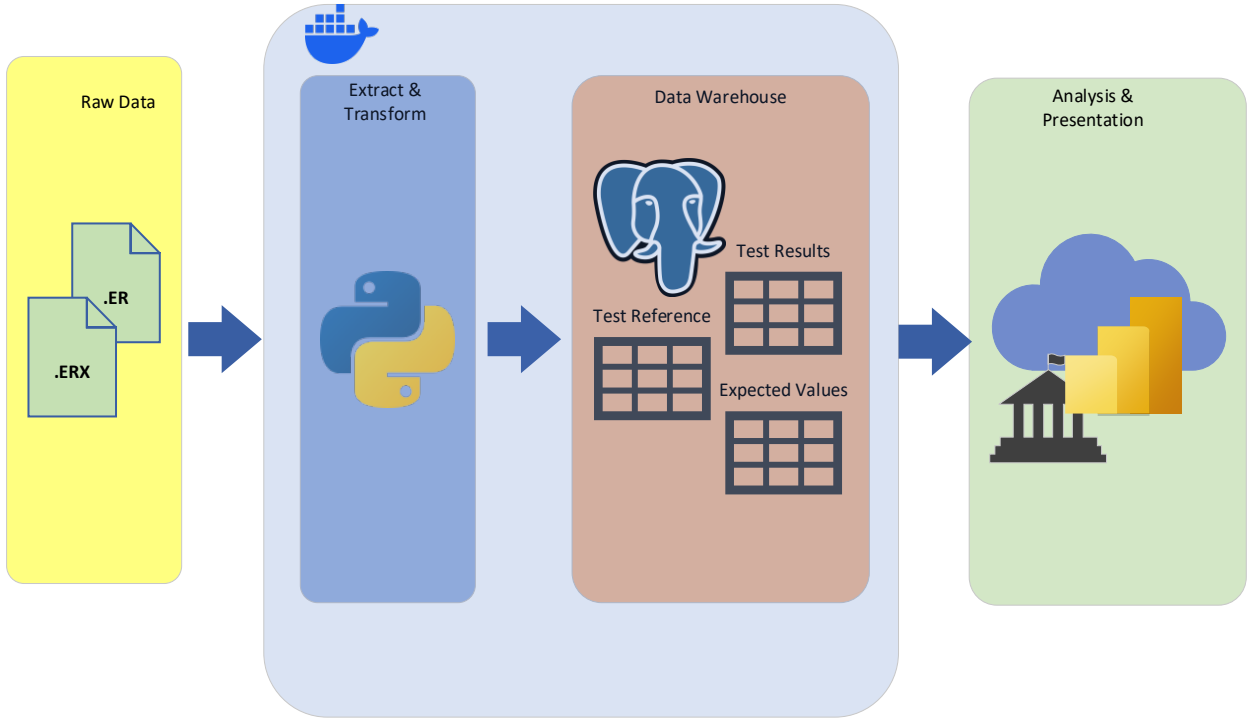
WSIRD
Weapon System Interactive Reporting Dashboard

C5 AWTS Data Analysis History

- Data being collected from AWTS testing is easily readable but not ready for analysis and reporting
- Engineers spend days extracting the relevant results from test results once [if] they are received
- This burden reduces our ability to understand fleet wide EWIS trends
- Results are not connected to maintenance actions, giving reliability engineers an incomplete picture

BLUF: AWTS data is often underutilized when making reliability assessments, data inaccessibility does not help

AWTS Data Ingest Architecture



- Two Python Applications: MAGNUS and EVE
- Results Published to DoD PowerBi, along side REMIS data

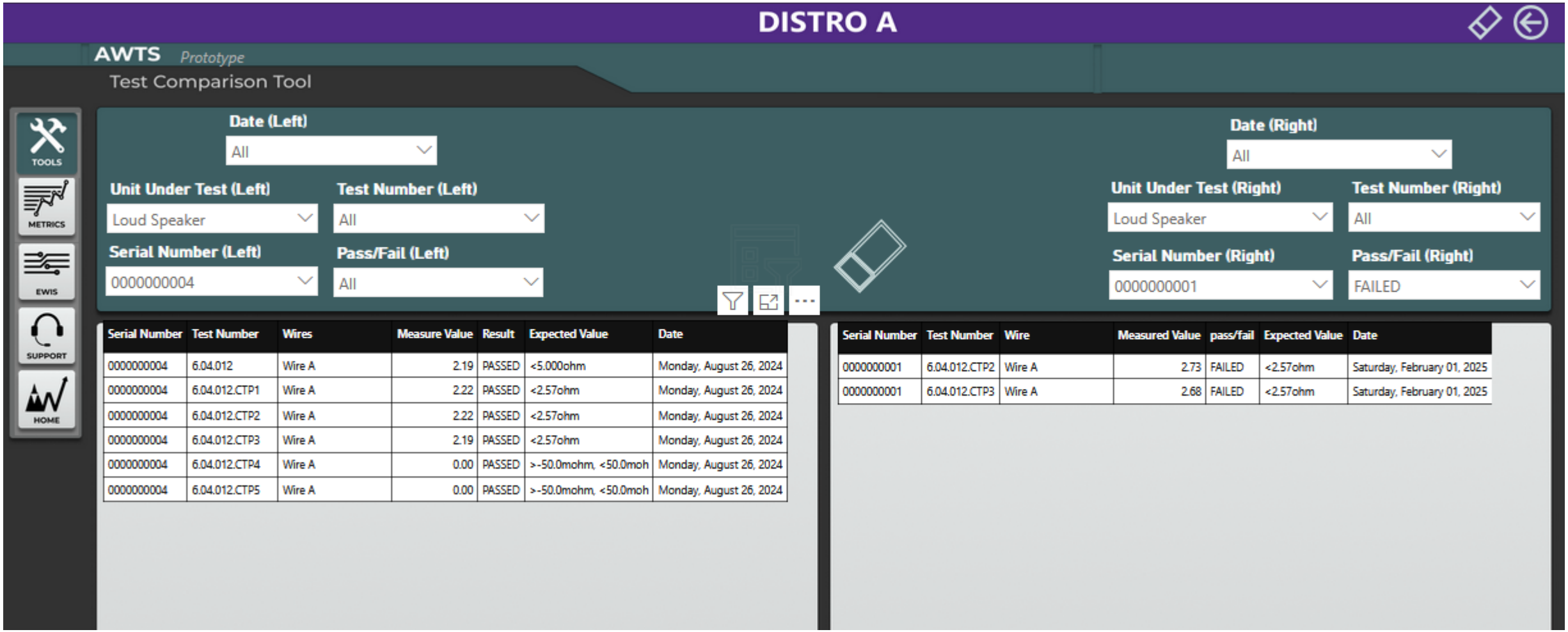
Current Reports

- Test Event Debrief Page
  - What was tested and what failed from previous test?
- Wire Path History
  - Are there any Wire sections that consistently fail?
- Test Event Comparison Tool
  - How have measured or expected values
- Fleet Failure Metrics
- Test Results Search

DISTRO A DEMO


WSIRD
Weapon System Interactive Reporting Dashboard
TOOLS
METRICS
EWIS
SUPPORT
HOME
AWTS
IC3 CR34M
Dashboard
Developed by KIHOMAC | 107 Industrial Way, Byron GA 31008 | WSIRD Portal | Contact Us
Last Record: Thursday, May 08, 2025
Distribution A

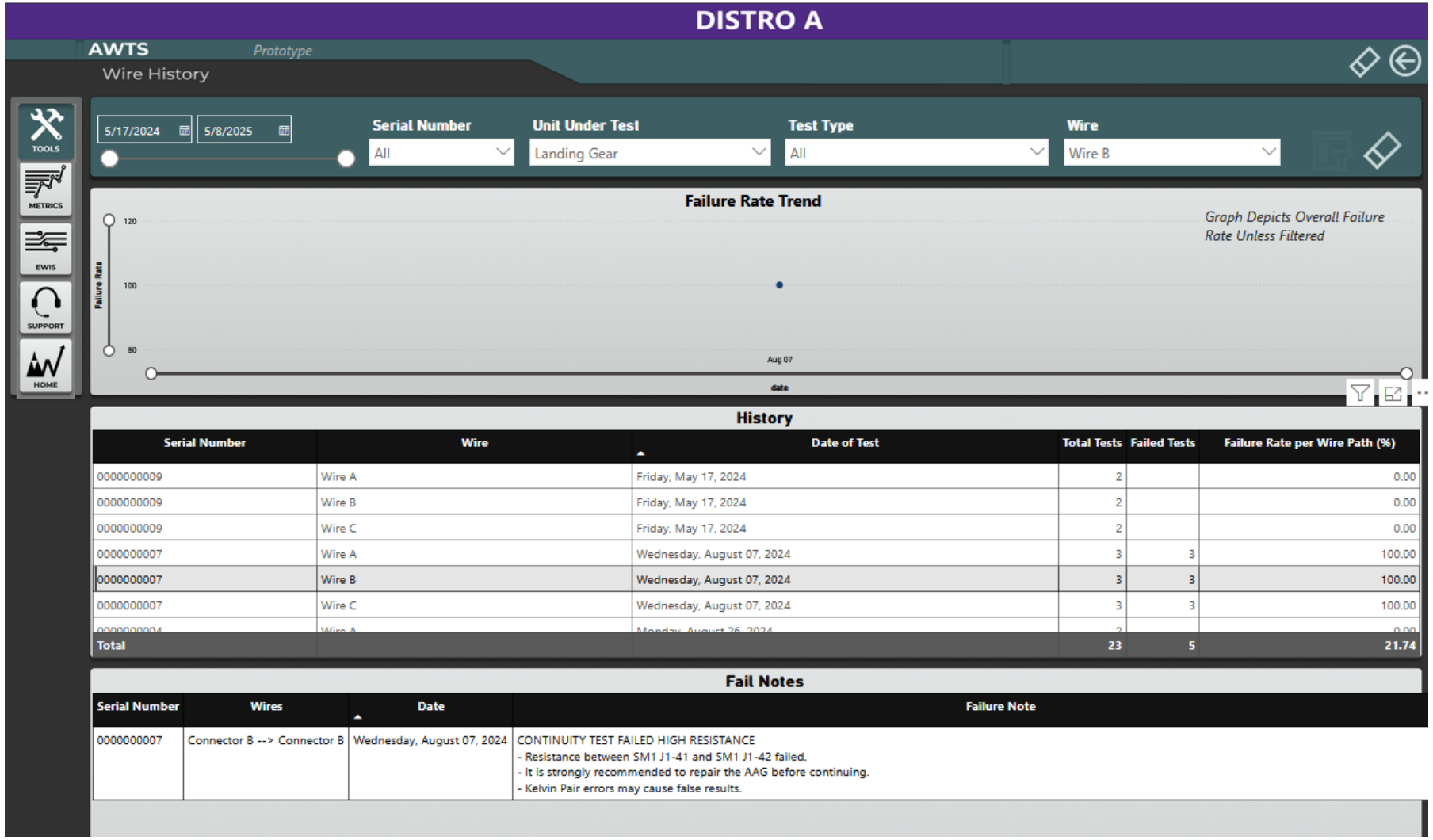
AWTS Test Comparison



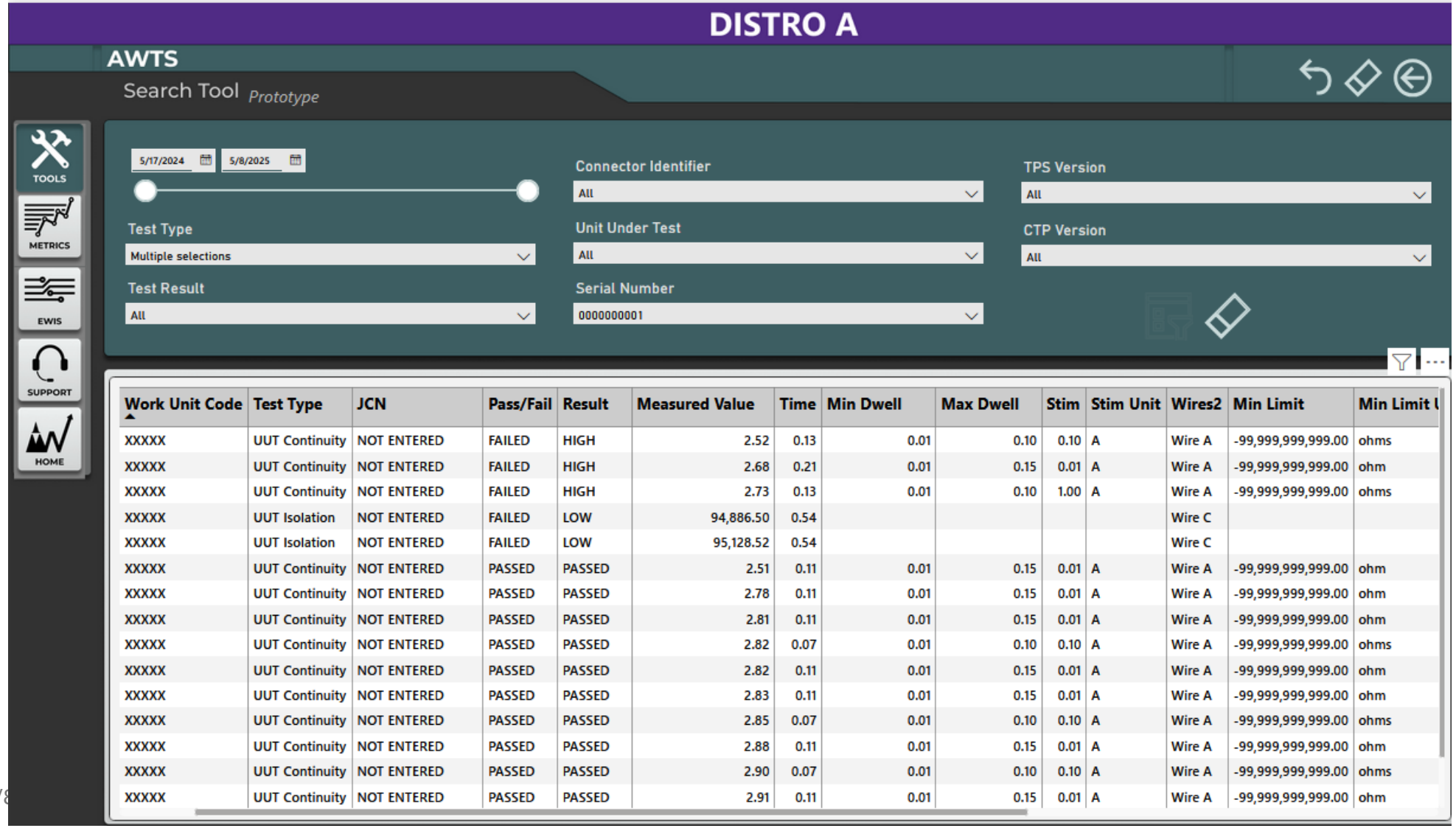
Serial Number	Test Number	Wires	Measure Value	Result	Expected Value	Date
0000000004	6.04.012	Wire A	2.19	PASSED	<5.000ohm	Monday, August 26, 2024
0000000004	6.04.012.CTP1	Wire A	2.22	PASSED	<2.57ohm	Monday, August 26, 2024
0000000004	6.04.012.CTP2	Wire A	2.22	PASSED	<2.57ohm	Monday, August 26, 2024
0000000004	6.04.012.CTP3	Wire A	2.19	PASSED	<2.57ohm	Monday, August 26, 2024
0000000004	6.04.012.CTP4	Wire A	0.00	PASSED	>-50.0mohm, <50.0moh	Monday, August 26, 2024
0000000004	6.04.012.CTP5	Wire A	0.00	PASSED	>-50.0mohm, <50.0moh	Monday, August 26, 2024

Serial Number	Test Number	Wire	Measured Value	pass/fail	Expected Value	Date
0000000001	6.04.012.CTP2	Wire A	2.73	FAILED	<2.57ohm	Saturday, February 01, 2025
0000000001	6.04.012.CTP3	Wire A	2.68	FAILED	<2.57ohm	Saturday, February 01, 2025

Wire Path History



Test Search results



Work Unit Code	Test Type	JCN	Pass/Fail	Result	Measured Value	Time	Min Dwell	Max Dwell	Stim	Stim Unit	Wires2	Min Limit	Min Limit U
XXXXX	UUT Continuity	NOT ENTERED	FAILED	HIGH	2.52	0.13	0.01	0.10	0.10	A	Wire A	-99,999,999,999.00	ohms
XXXXX	UUT Continuity	NOT ENTERED	FAILED	HIGH	2.68	0.21	0.01	0.15	0.01	A	Wire A	-99,999,999,999.00	ohm
XXXXX	UUT Continuity	NOT ENTERED	FAILED	HIGH	2.73	0.13	0.01	0.10	1.00	A	Wire A	-99,999,999,999.00	ohms
XXXXX	UUT Isolation	NOT ENTERED	FAILED	LOW	94,886.50	0.54					Wire C		
XXXXX	UUT Isolation	NOT ENTERED	FAILED	LOW	95,128.52	0.54					Wire C		
XXXXX	UUT Continuity	NOT ENTERED	PASSED	PASSED	2.51	0.11	0.01	0.15	0.01	A	Wire A	-99,999,999,999.00	ohm
XXXXX	UUT Continuity	NOT ENTERED	PASSED	PASSED	2.78	0.11	0.01	0.15	0.01	A	Wire A	-99,999,999,999.00	ohm
XXXXX	UUT Continuity	NOT ENTERED	PASSED	PASSED	2.81	0.11	0.01	0.15	0.01	A	Wire A	-99,999,999,999.00	ohm
XXXXX	UUT Continuity	NOT ENTERED	PASSED	PASSED	2.82	0.07	0.01	0.10	0.10	A	Wire A	-99,999,999,999.00	ohms
XXXXX	UUT Continuity	NOT ENTERED	PASSED	PASSED	2.82	0.11	0.01	0.15	0.01	A	Wire A	-99,999,999,999.00	ohm
XXXXX	UUT Continuity	NOT ENTERED	PASSED	PASSED	2.83	0.11	0.01	0.15	0.01	A	Wire A	-99,999,999,999.00	ohm
XXXXX	UUT Continuity	NOT ENTERED	PASSED	PASSED	2.85	0.07	0.01	0.10	0.10	A	Wire A	-99,999,999,999.00	ohms
XXXXX	UUT Continuity	NOT ENTERED	PASSED	PASSED	2.88	0.11	0.01	0.15	0.01	A	Wire A	-99,999,999,999.00	ohm
XXXXX	UUT Continuity	NOT ENTERED	PASSED	PASSED	2.90	0.07	0.01	0.10	0.10	A	Wire A	-99,999,999,999.00	ohms
XXXXX	UUT Continuity	NOT ENTERED	PASSED	PASSED	2.91	0.11	0.01	0.15	0.01	A	Wire A	-99,999,999,999.00	ohm

Conclusion

- AWTS Test Data has been potentially underutilized within the C5 SPO
- Key enabler to using AWTS data is the intensive translation from ER/ERX format to a flat format
  - Automating translation turns hours of searching to minutes of query
- Once translated, AWTS data is useful for understanding and communicating wire health within fleet