

# xBolt

## Post Run

**EXTREME**™  
**EXTREME**



# Objectives

- Learn post run dump procedures
- Evaluate tool physical components for re-run
- Understand Post Run PTK

# xBolt Real Time Operations

xBolt Post Run Dump

# xBolt Post Run Dump

- Open Launcher
- Select “Memory Dump”

The screenshot displays the xBolt software interface with the title bar "EXTREME MEASUREMENT WHILE DRILLING". The main area is divided into four columns: "Run Setup", "Drilling and Logging", "Post-Run", and "Reporting".

- Run Setup:** TOOL SETUP (wrench icon), LIVE TOOL COMM (radio tower icon).
- Drilling and Logging:** TOOLFACE (target icon), SURVEY (globe icon).
- Post-Run:** MEMORY DUMP (SD card icon).
- Reporting:** SIGNAL ANALYSIS (clipboard icon), INTERACT (circular arrows icon).

At the bottom left, there is a section titled "ACTIVATE RUN FOR REALTIME LOGGING" with two buttons labeled "2" and "3".

At the bottom right, there is a "JOB MENU" section with buttons for "NEW", "IMPORT", and "EXPORT". To its right, a panel displays job information:

19MLD4399	
Red Lodge C20 - 11F 6H	
Active Run	: 2
Start Date	: 29-Jul-2019
Current Depth	: 22469ft
File Size	: 838 MB

# xBolt Post Run Dump

- Select path for archive
  - Option to open archive path when dump complete
- Load memory from dump file
  - Used for loading memory data of previously dumped tool into run
- Time Zone
  - Select time zone used in EDR data
  - Can be reprocessed if time zone is incorrect
- Verify/select all node present that contain memory and begin dump
- Select “Download”

Flash Retrieval Progress

Cancel Download Next

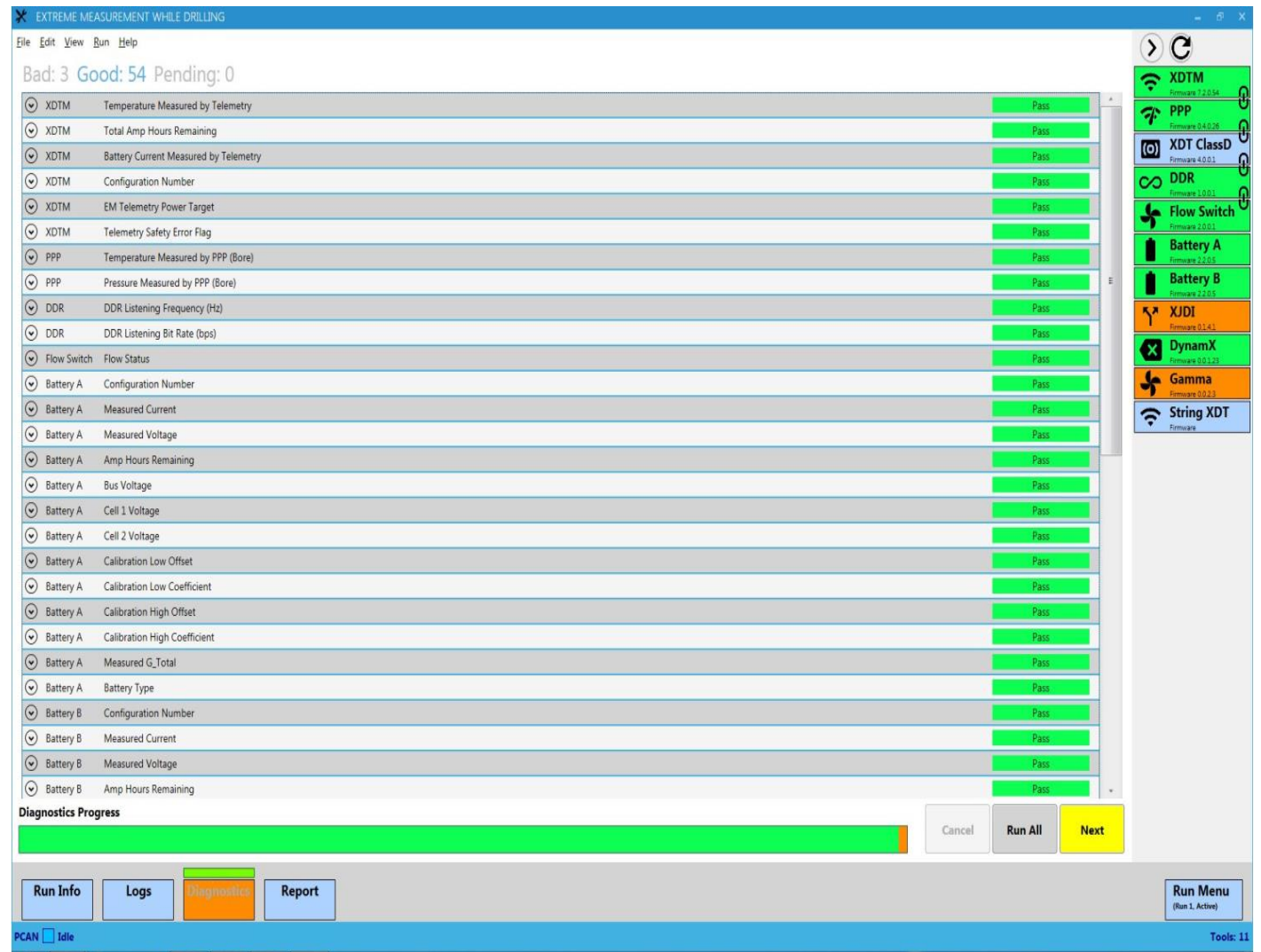
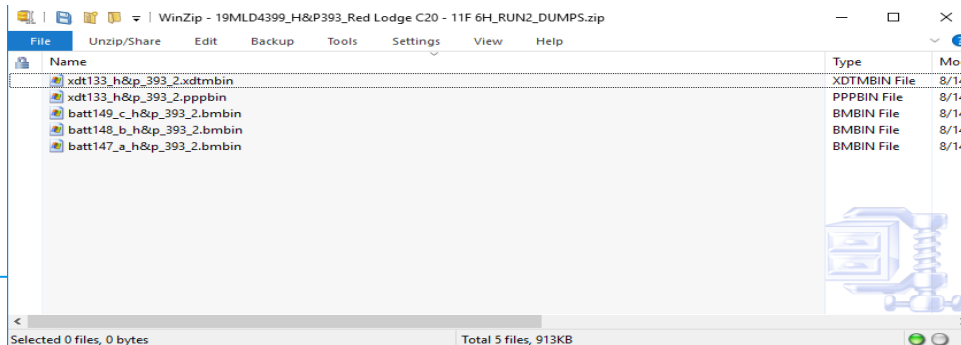
Run Info Logs Diagnostics Report Run Menu (Run 2, Active)

PCAN  Idle Tools: 11

RETRIEVE?	TOOL	SIZE	RESULT
No <input type="checkbox"/>	XDTM	0.0 bytes	Pending
No <input type="checkbox"/>	PPP	0.0 bytes	Pending
No <input type="checkbox"/>	Battery A	0.0 bytes	Pending
No <input type="checkbox"/>	Battery B	0.0 bytes	Pending
No <input type="checkbox"/>	Battery C	0.0 bytes	Pending

# xBolt Post Run Dump

- Complete post run diagnostics and check what failed diagnostics if any
- Save post run report
- Send post run report and dump files to OSC for re-run QC



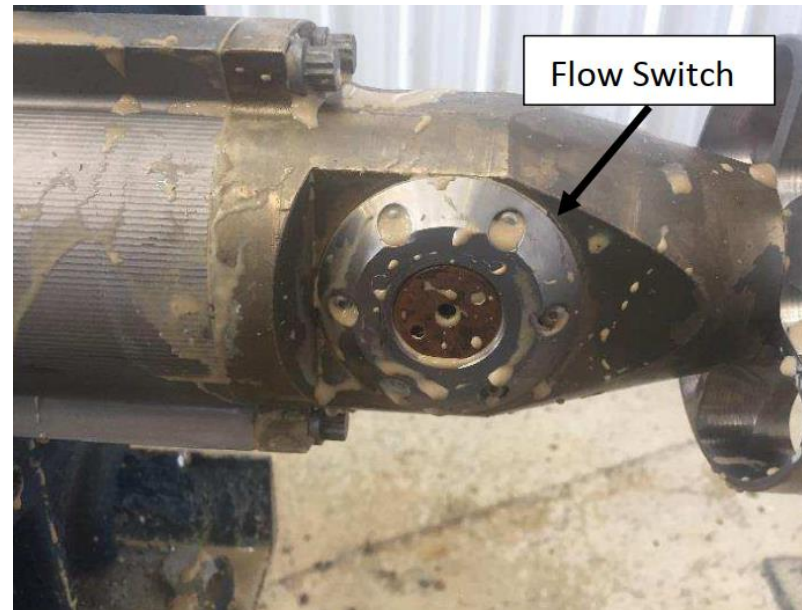
# xBolt Real Time Operations

xBolt Physical Re-Run Checklist



## xBolt-L MOP Physical Checks

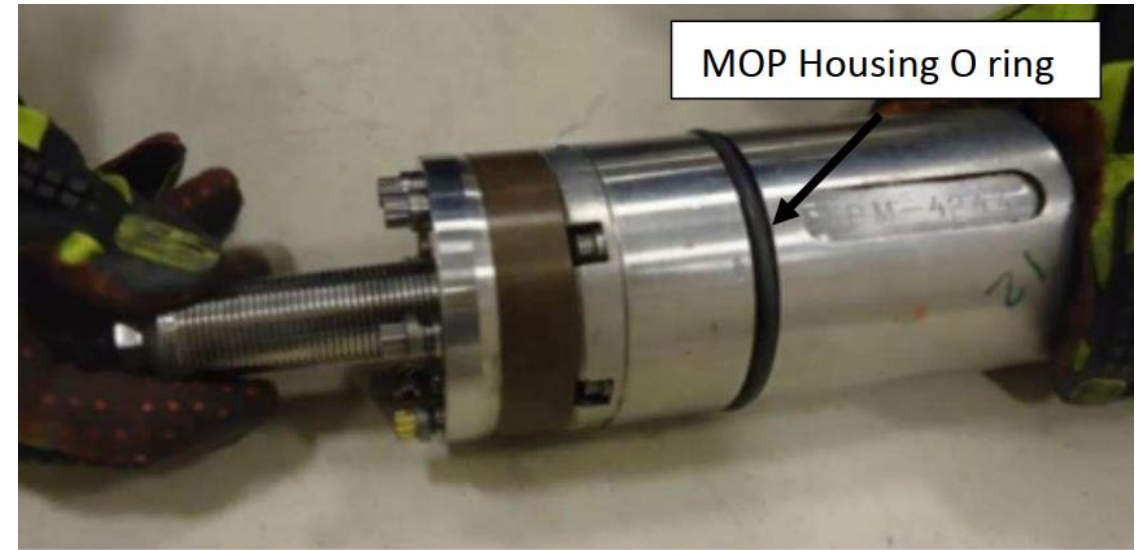
- Ensure that the gap between rib protector and housing shoulder is 0.002 – 0.015”
- Check area around flow switch for flow switch blank for leaking oil, do not re-run if oil is leaking





# xBolt-L MOP Physical Checks

- Remove mud screen
- Check O-Ring/Polypack for signs of damage and replace if necessary
- Clean area around upper bearing and main shaft while activating flow switch (use water if WBM application, LPT contact cleaner if OBM)



# xBolt-L MOP Physical Checks

- Clean area around poppet and rib protector (use water or WBM, LPT contact cleaner for OBM)
- Coat upper bearing, main shaft, poppet and rib protector with grease (000-66016)



# xBolt-L MOP Physical Checks

- In WBM application, if MOP is sitting on bank for more than 3 days, it must be flushed and packed with grease
- In OBM application, if MOP is sitting on bank for more than 4 days, it must be sent back to shop for maintenance
- Refer to ITC# [7011282](#) for detailed procedure

Sr. No	Criterion	Limit	PASS/FAIL
1.	Visual inspection show any damage/wash	N/A	
2.	Circulating Hours		
	High Flow MOP	<300	
	Low Flow MOP	<250	
	Mini MOP	<200	
3.	Sand Concentration	<1%	
4.	Solids Content (Low Gravity)	<8%	
5.	pH Range	9.5-12	
6.	Does the MOP pulse when the flow switch is pulled	N/A	

CAUTION: The MOP needs to pass all the above criterion to be fit for rerun. These are only guidelines. In addition local drilling conditions (including high shock and vibe/abrasive drilling conditions) need be taken into consideration before re running a MOP.



# xBolt-R Pulser Physical Checks

- Inspect pulser for wash/damage especially on key seat.
- If R-Pulser has more than 200 circulating hours, return for service
- If R-Pulser is run OOS for sand concentration (>1%), low gravity solids (>8%) or PH (9.5-12) or jarring, return pulser for maintenance
- All pulser cavities should be flushed post run when pulling tool
- Verify tool passes post run calibration and is able to pulse when flow is simulated

No	Question	Expected Value	Current Value	Result
<b>MOP / Pulser Re Run Criteria</b>				
<b>MOP / Pulser</b>				
1	Visual Inspection show any damage or wash?	NO		
2	Circulating Hours (accumulated since last service).			
3	High Flow MOP	<300		
4	Low Flow MOP	<250		
5	Mini MOP	<200		
6	R Pulser	<200		
7	Sand Concentration %	<1		
8	Solids Content (Low Gravity)	<8%		
9	pH Range	9.5 - 12		
<b>TCM/DAS/UGS Re Run Criteria</b>				
<b>Previous Run observations (Real Time)</b>				
1	Jarring occur on run?	NO		

# xBolt Bow Springs

- Inspect bow springs for wash or damage post run
- Use Go-No-Go Gauge to verify bow springs maintain proper OD for re-run in collar size

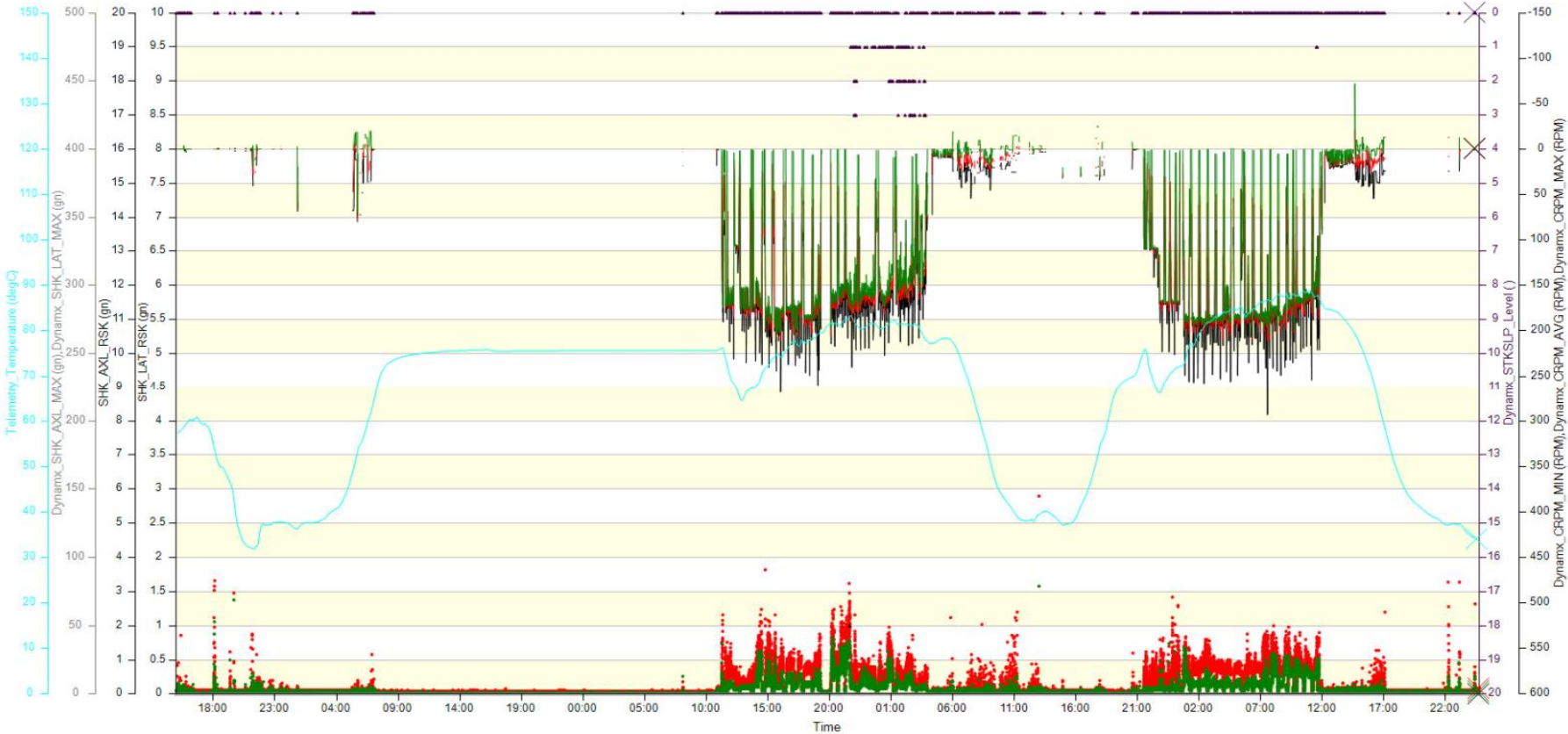


# xBolt Real Time Operations

xBolt Post Run PTK

# xBolt Post Run PTK

DynamX Cross Plot



From 03-Aug-2019 14:59:55

▲ Lateral\_Shock\_Risk ▲ Axial\_Shock\_Risk ▲ Stick\_Slip ● Lateral\_Shock ● Axial\_Shock — CRPM\_MIN — CRPM\_MAX — CRPM\_AVG — Telemetry\_Temperature

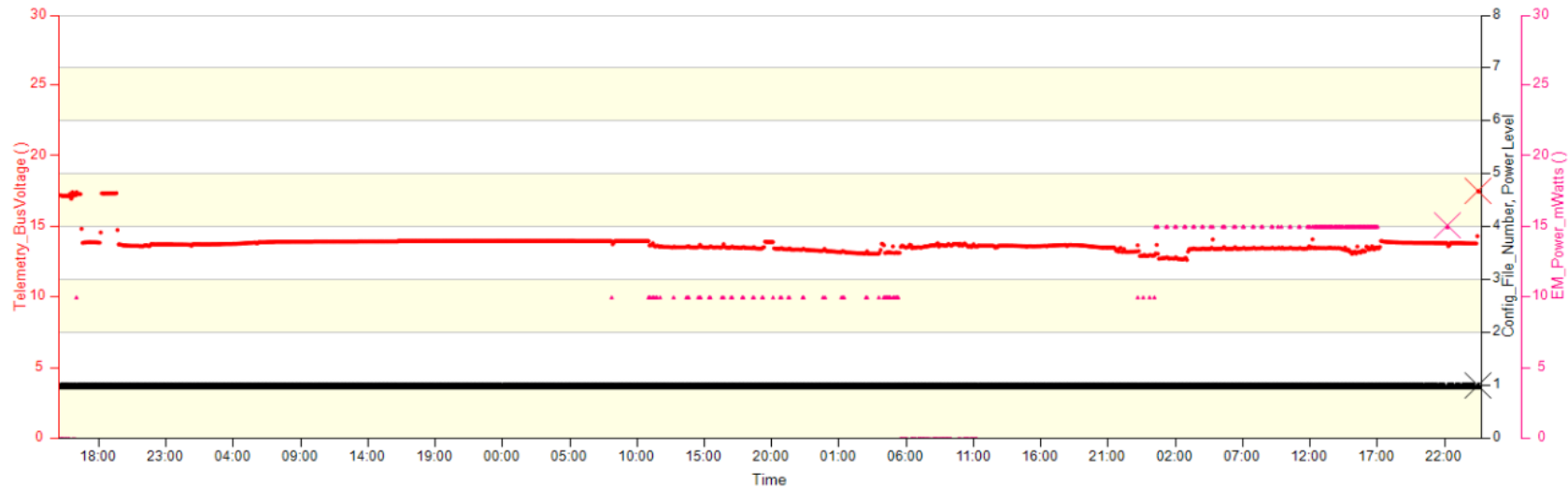
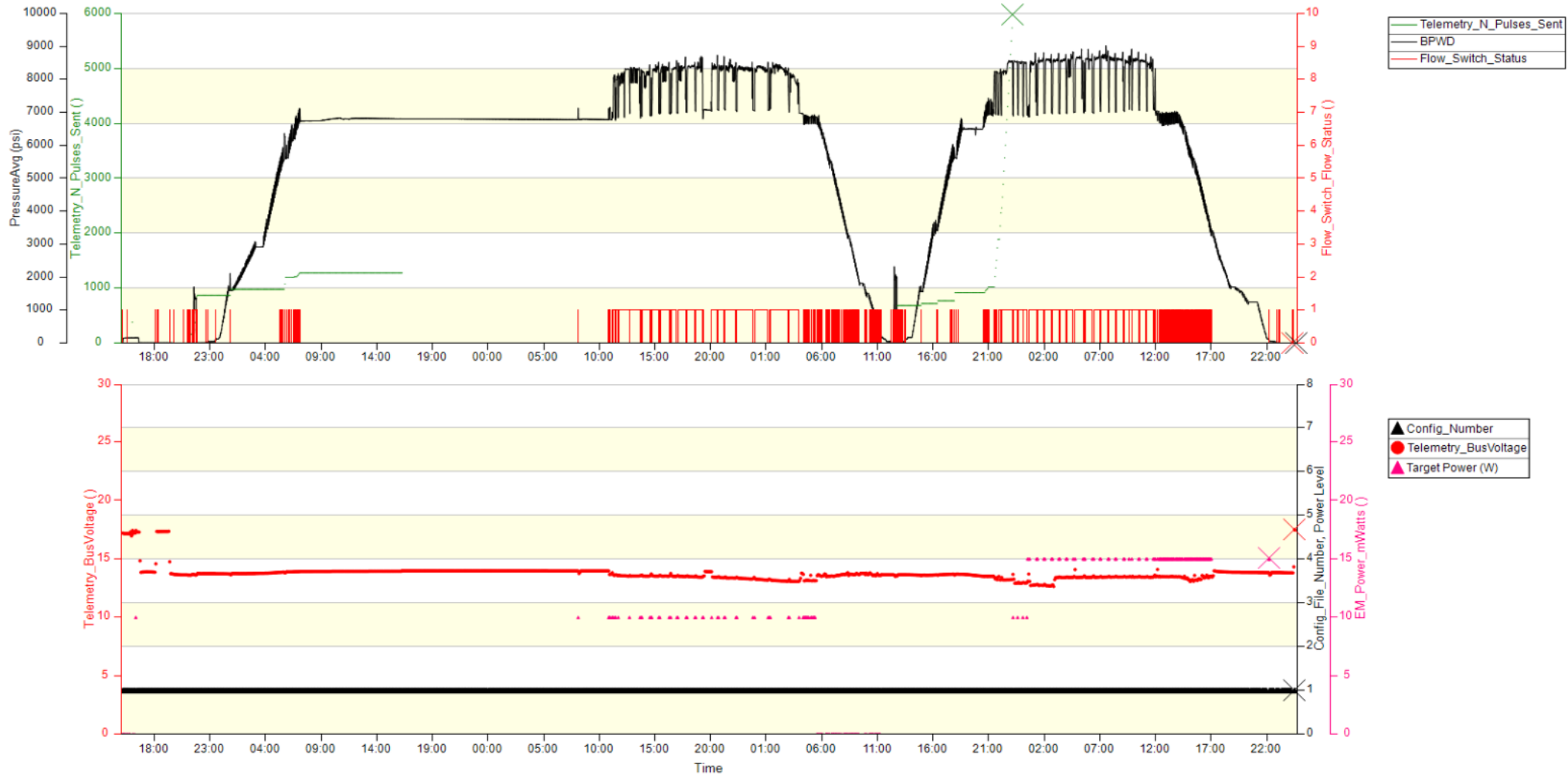
To 08-Aug-2019 00:42:49





# xBolt Post Run PTK (cont.)

## Pressure Cross Plot



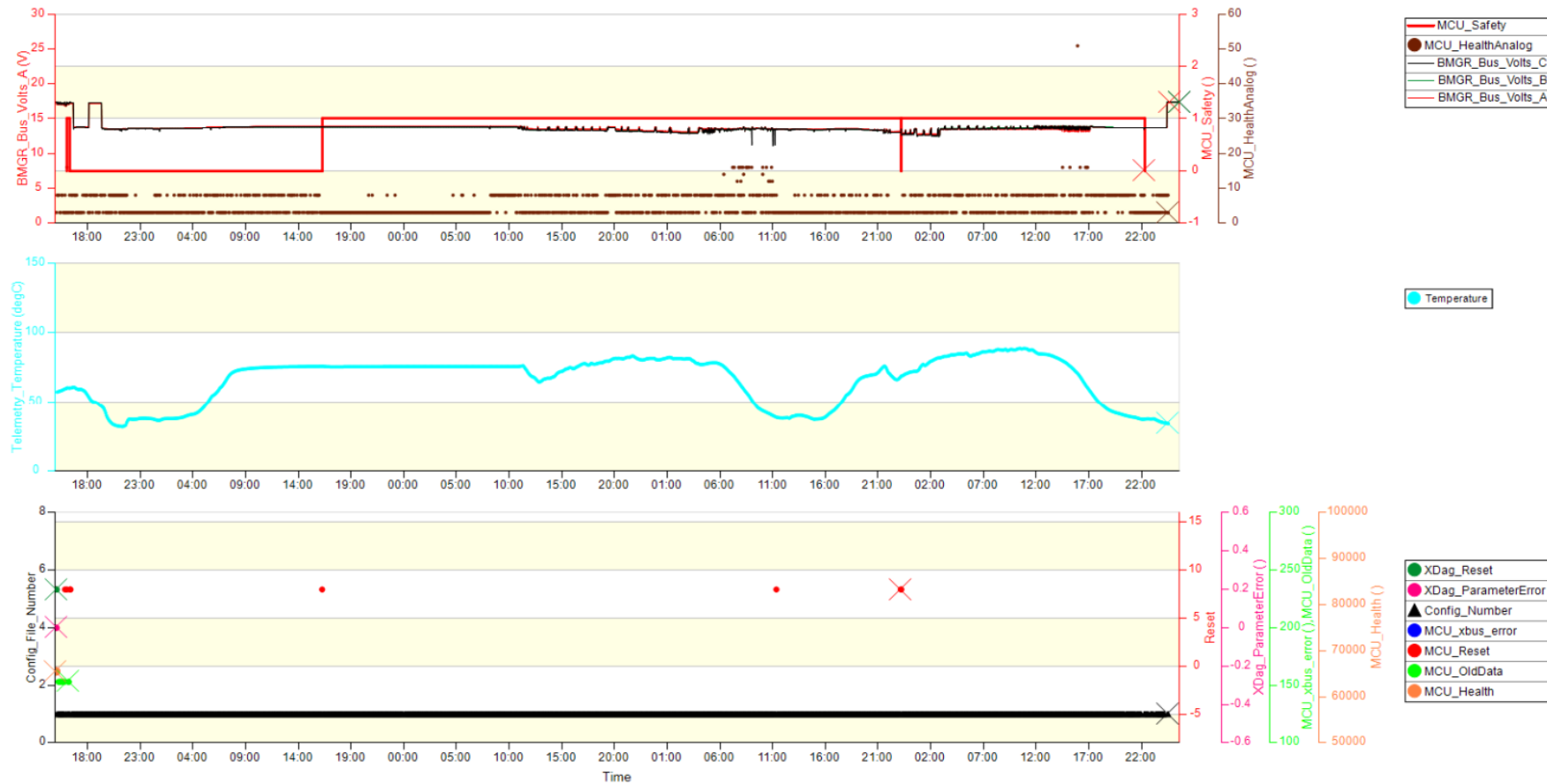
From 03-Aug-2019 15:04:04

To 08-Aug-2019 00:42:59



# xBolt Post Run PTK (cont.)

## Error Cross Plot

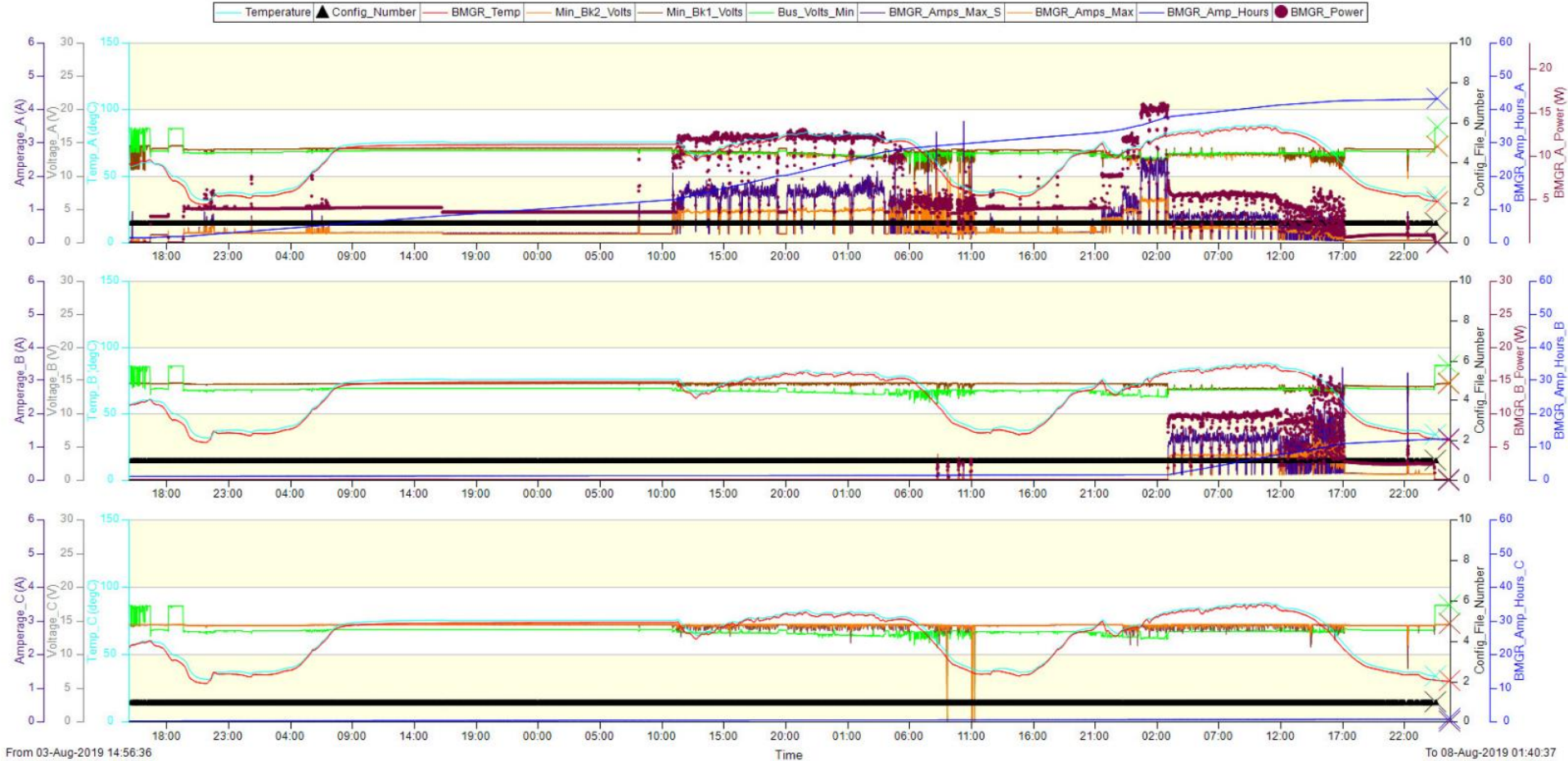


From 03-Aug-2019 14:56:36

To 08-Aug-2019 01:38:05

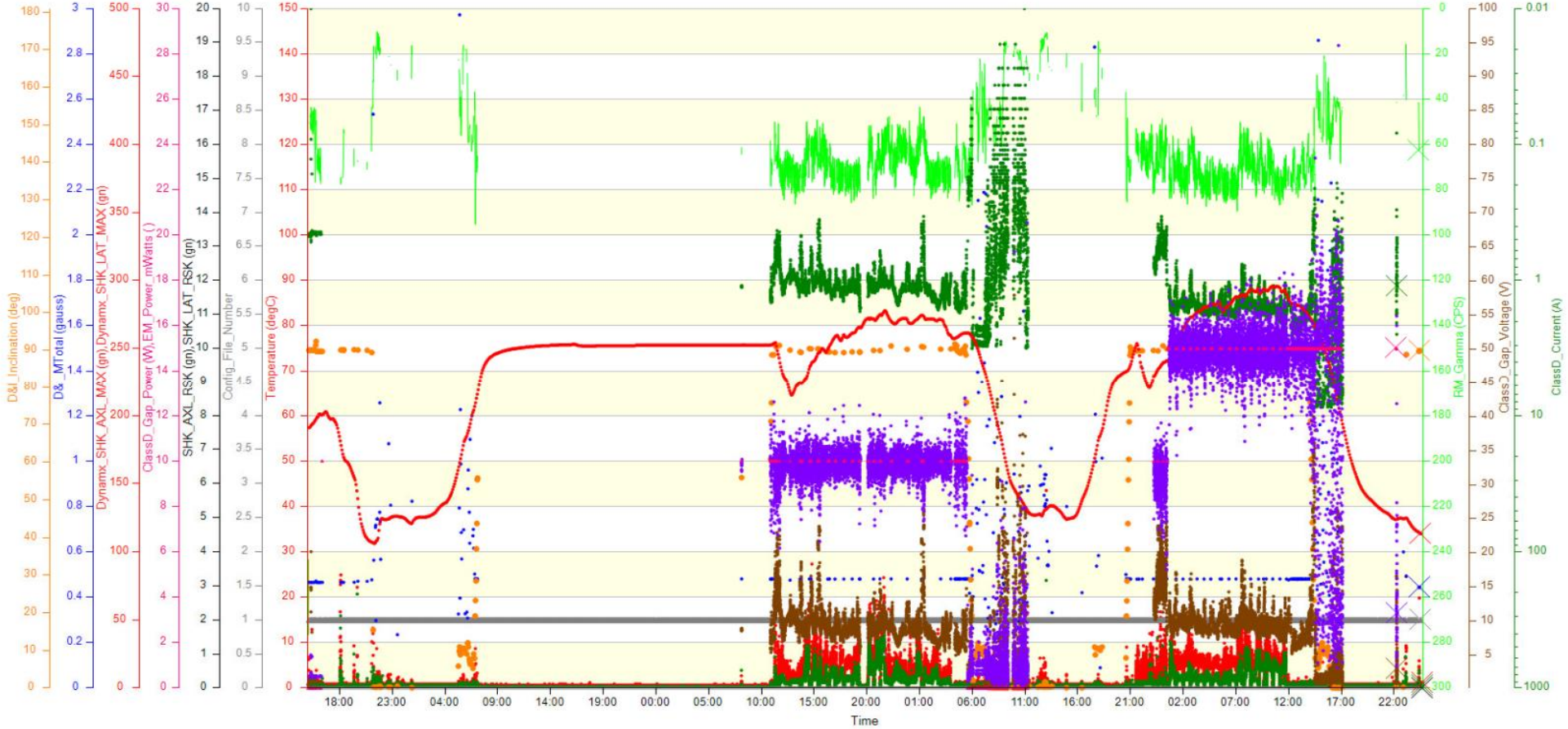
# xBolt Post Run PTK (cont.)

## Battery Cross Plot



# xBolt Post Run PTK (cont.)

Formation Cross Plot



From 03-Aug-2019 14:59:52



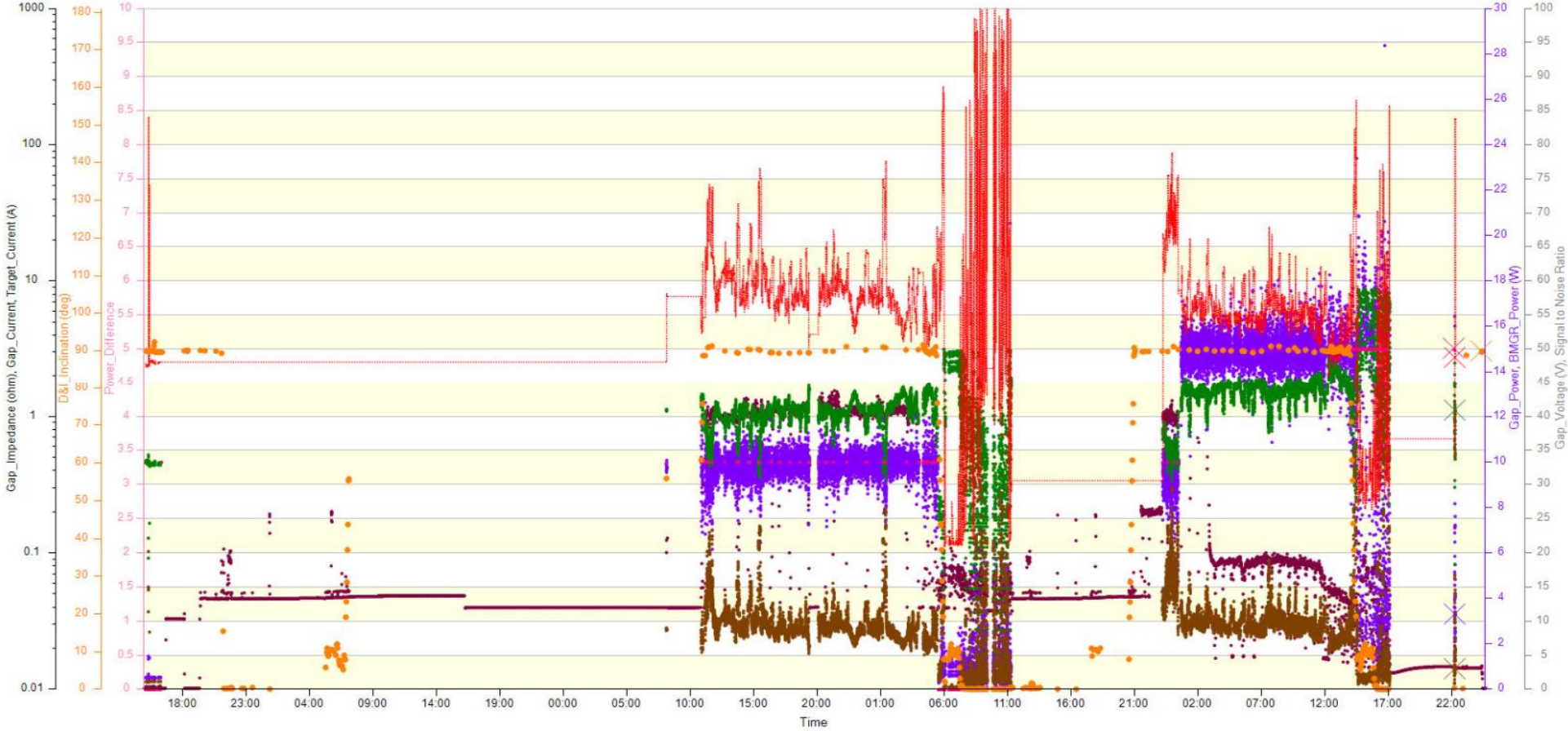
To 08-Aug-2019 00:42:49





# xBolt Post Run PTK (cont.)

## Class D Output



From 03-Aug-2019 14:56:36

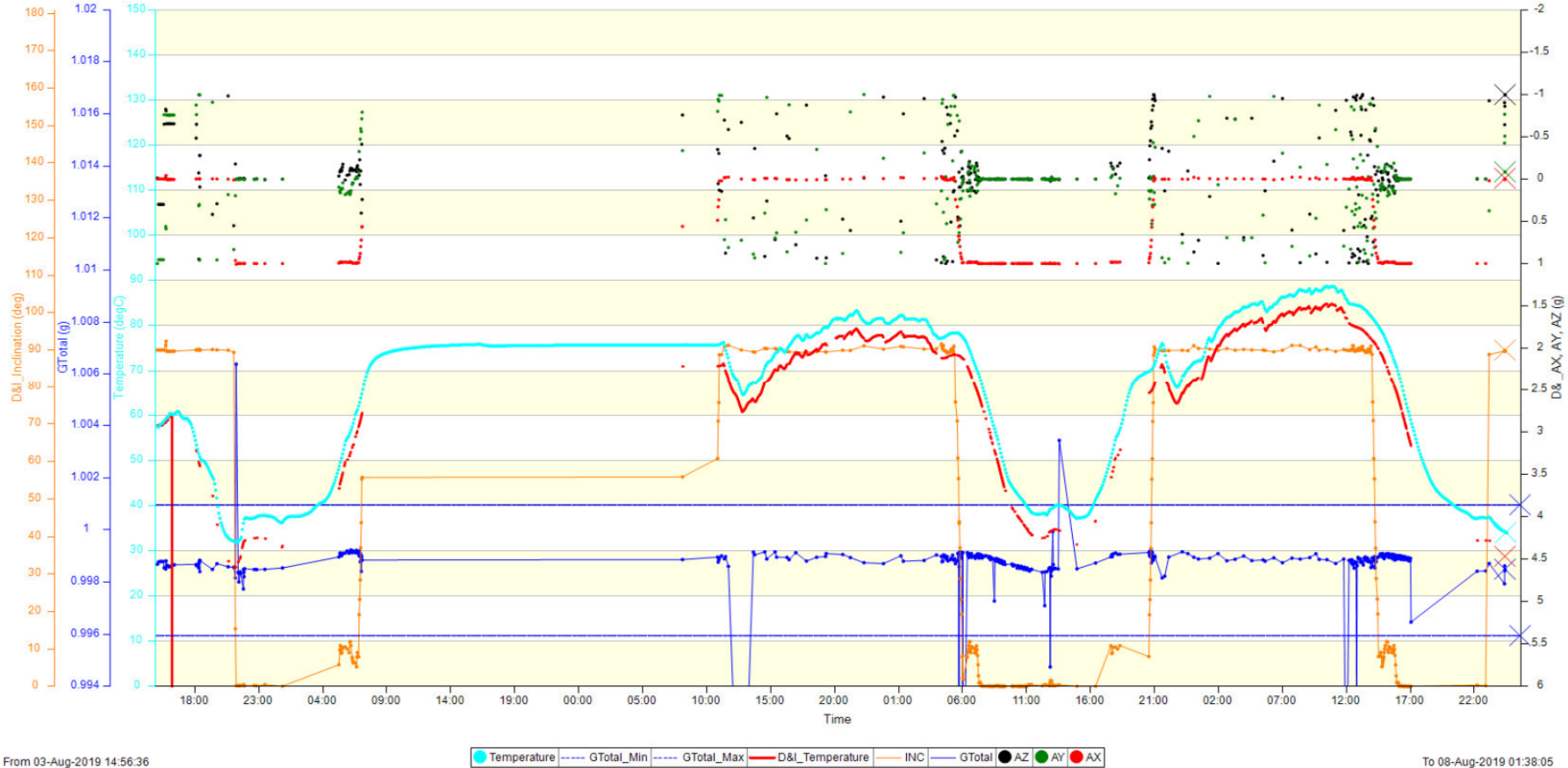
Legend: Power\_Difference (x), Target Power (W) (▲), INC (●), Gap\_Voltage (●), Gap\_Power (●), Gap\_Impedance (---), Gap\_Current (●), BMGR\_Power (●), BMGR\_Power (●)

To 08-Aug-2019 00:36:37



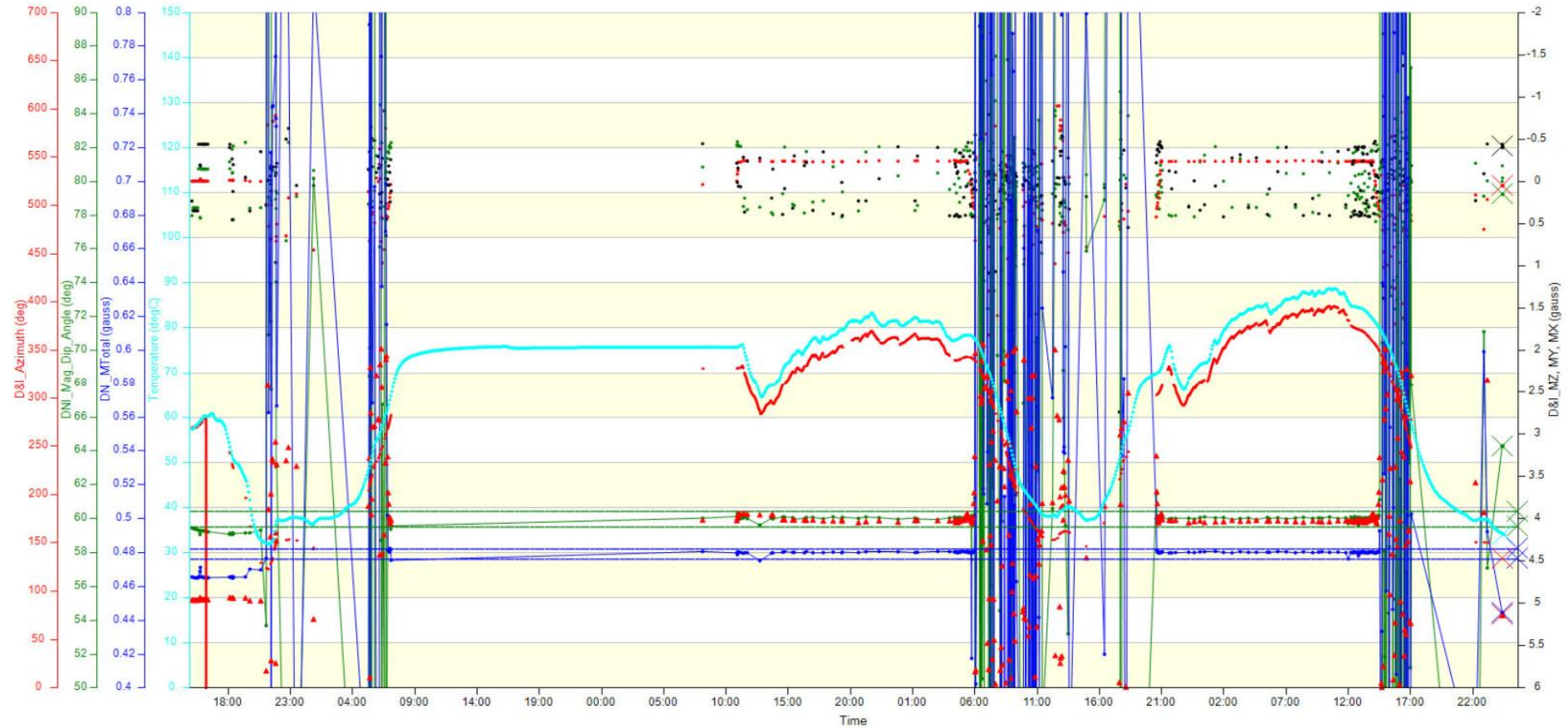
# xBolt Post Run PTK (cont.)

Accelerometer Cross Plot



# xBolt Post Run PTK (cont.)

## Magnetometer Cross Plot



From 03-Aug-2019 14:56:36

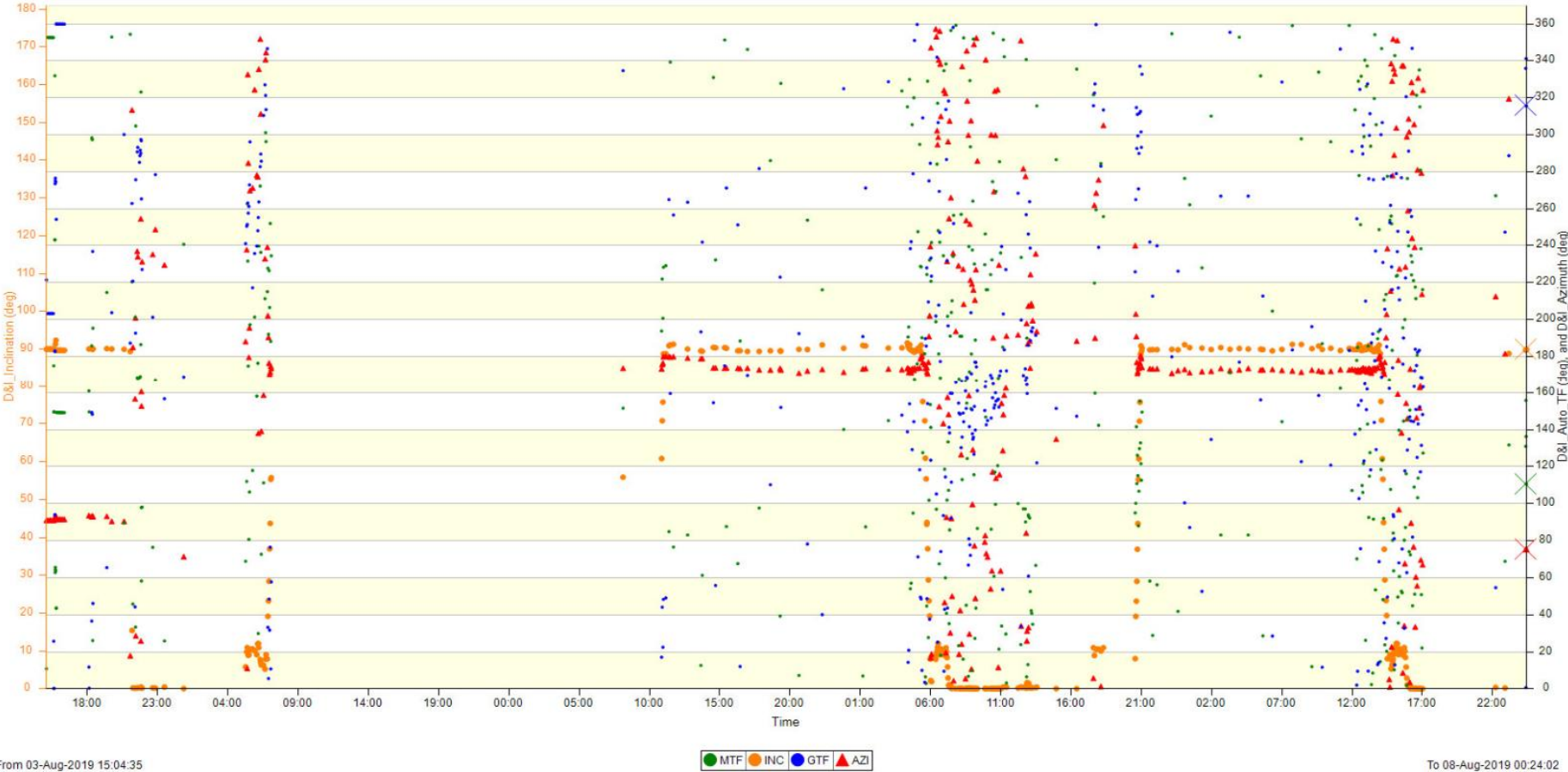
Temperature MTotal\_Min MTotal\_Max Dip\_Min Dip\_Max D&I\_Temperature Mag\_Dip\_Angle MZ MY MX MTotal AZI

To 08-Aug-2019 01:38:05



# xBolt Post Run PTK (cont.)

Tool Face Cross Plot



# Summary

- Learn post run dump procedures
- Evaluate tool physical components for re-run
- Understand Post Run PTK