

CAT AERATION OPERATIONAL DATA

December 3, 2014

Performance you can rely on.



Data available: 11 tests



FTP directory /refdata/diesel/coat/data/matrix op data/ at ftp.astmtmc.cmu.edu.

Welcome to the Test Monitoring Center FTP Server

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<DIR> ..
08/27/14 02:55PM [GMT]          17,574 CAT Aeration Data Template.xlsx
11/19/14 01:20PM [GMT]      9,142,177 Lubrizol\_Test#1\_CMIR#104081 \(i R1 Repeat\).xlsx
11/19/14 01:20PM [GMT]      8,711,519 Lubrizol\_Test#2\_CMIR#103459 \(k R1\).xlsx
11/19/14 01:22PM [GMT]      8,849,810 Lubrizol\_Test#3\_CMIR#103625 \(g R1\).xlsx
11/18/14 11:17AM [GMT]      6,216,000 SwRI Oil G Run 1 CMIR-103623 \(TMC Template\).xlsx
11/24/14 02:01PM [GMT]      6,620,378 SwRI Oil H Run 1 CMIR-103450 \(TMC Template\).xlsx
11/18/14 11:17AM [GMT]      5,829,532 SwRI Oil J Run 1 CMIR-103463 \(TMC Template\).xlsx
11/18/14 11:18AM [GMT]      5,281,983 SwRI Oil K Run 1 CMIR-103457 \(TMC Template\).xlsx
11/18/14 11:39AM [GMT]      6,353,424 SwRI Oil L Run 1 CMIR-103955 \(TMC Template\).xlsx
11/25/14 11:14AM [GMT]      3,138,046 TMC EG13\_STRUN8\_SOT141105.xlsx
11/25/14 11:12AM [GMT]      3,502,125 TMC EG4\_STRUN9\_SOT141107.xlsx
11/25/14 11:12AM [GMT]      3,254,695 TMC EG8\_STRUN7\_SOT141029.xlsx
```

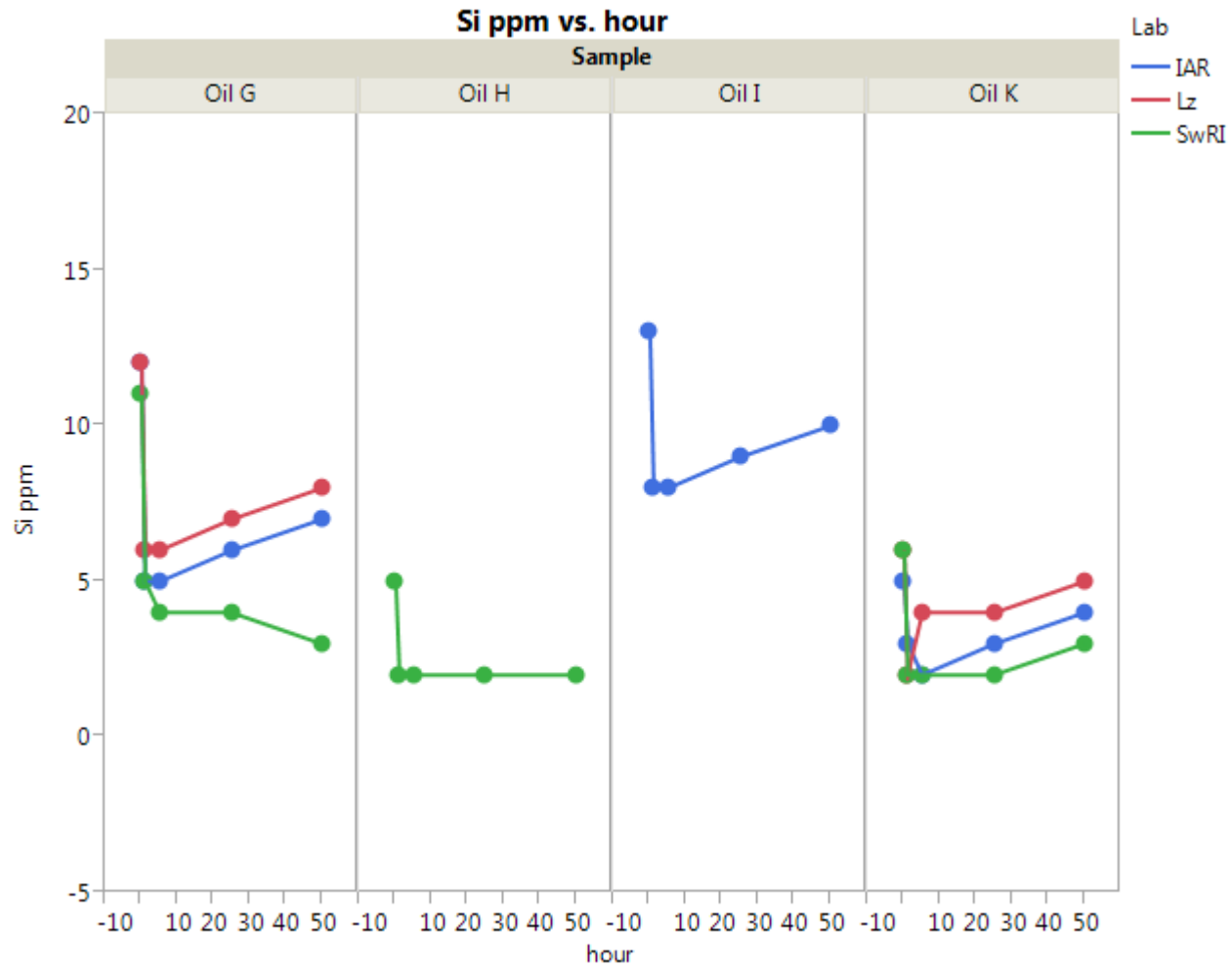
Lab	Sample	Run ID
EG	Oil G	RUN7
EG	Oil I	RUN8
EG	Oil K	RUN9
LZ	Oil G	Test#3
LZ	Oil I	Test#1
LZ	Oil K	Test#2
SW	Oil G	60-80
SW	Oil H	60-82
SW	Oil J	60-79
SW	Oil K	60-78
SW	Oil L	60-81

Silicon

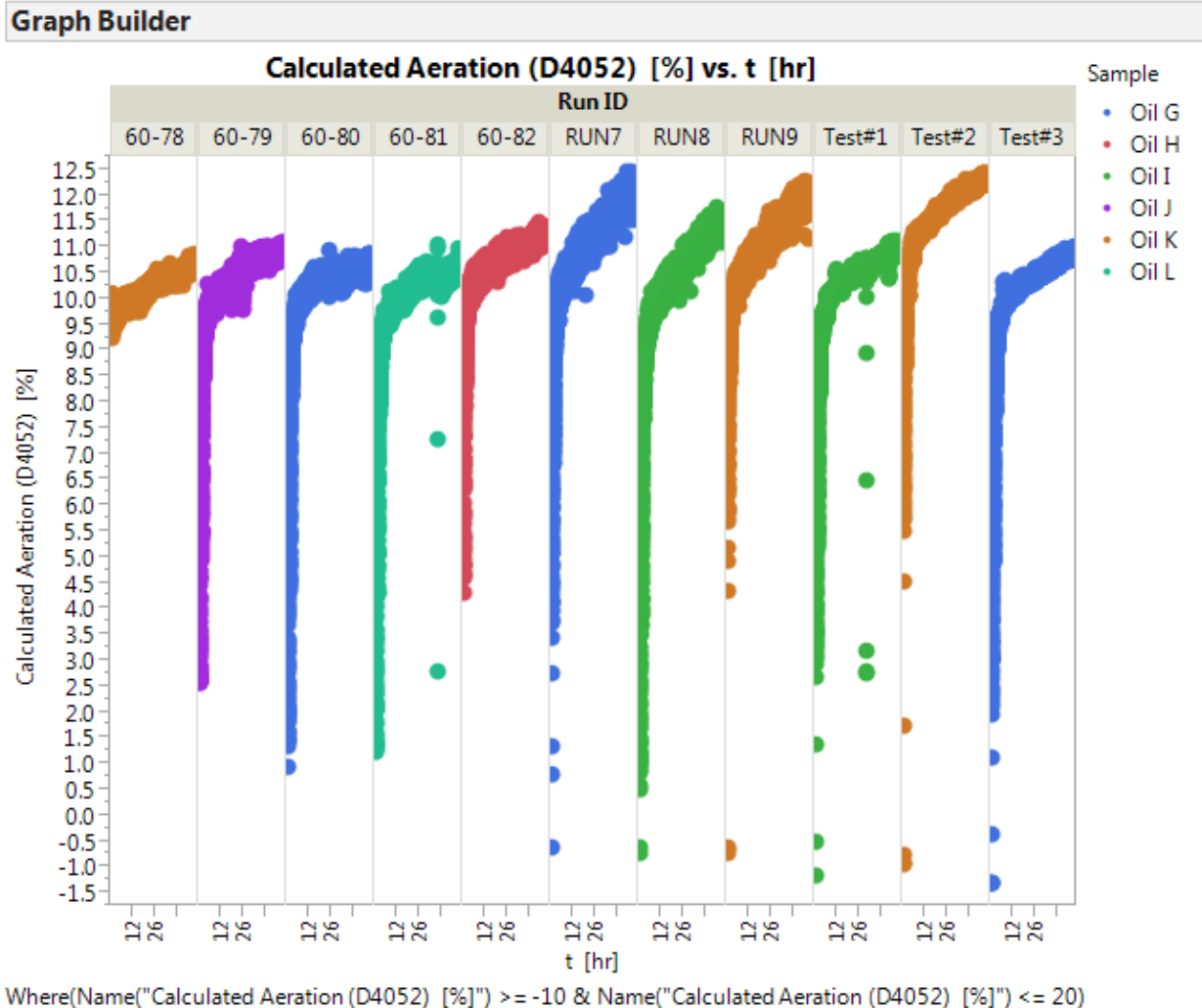


Sample	Lab	Run ID	N Rows	Si ppm (0 hr)	Si ppm (1 hr)	Si ppm (5 hr)	Si ppm (25 hr)	Si ppm (50 hr)
Oil G	EG	RUN7	6002	12	5	5	6	7
Oil I	EG	RUN8	6001	13	8	8	9	10
Oil K	EG	RUN9	6002	5	3	2	3	4
Oil G	LZ	Test#3	5999	12	6	6	7	8
Oil I	LZ	Test#1	5999	17	11	11	12	12
Oil K	LZ	Test#2	5999	6	2	4	4	5
Oil G	SW	60-80	6000	11	5	4	4	3
Oil H	SW	60-82	6000	5	2	2	2	2
Oil J	SW	60-79	5999	10	4	4	4	4
Oil K	SW	60-78	6000	6	2	2	2	3
Oil L	SW	60-81	6000	14	8	8	7	8

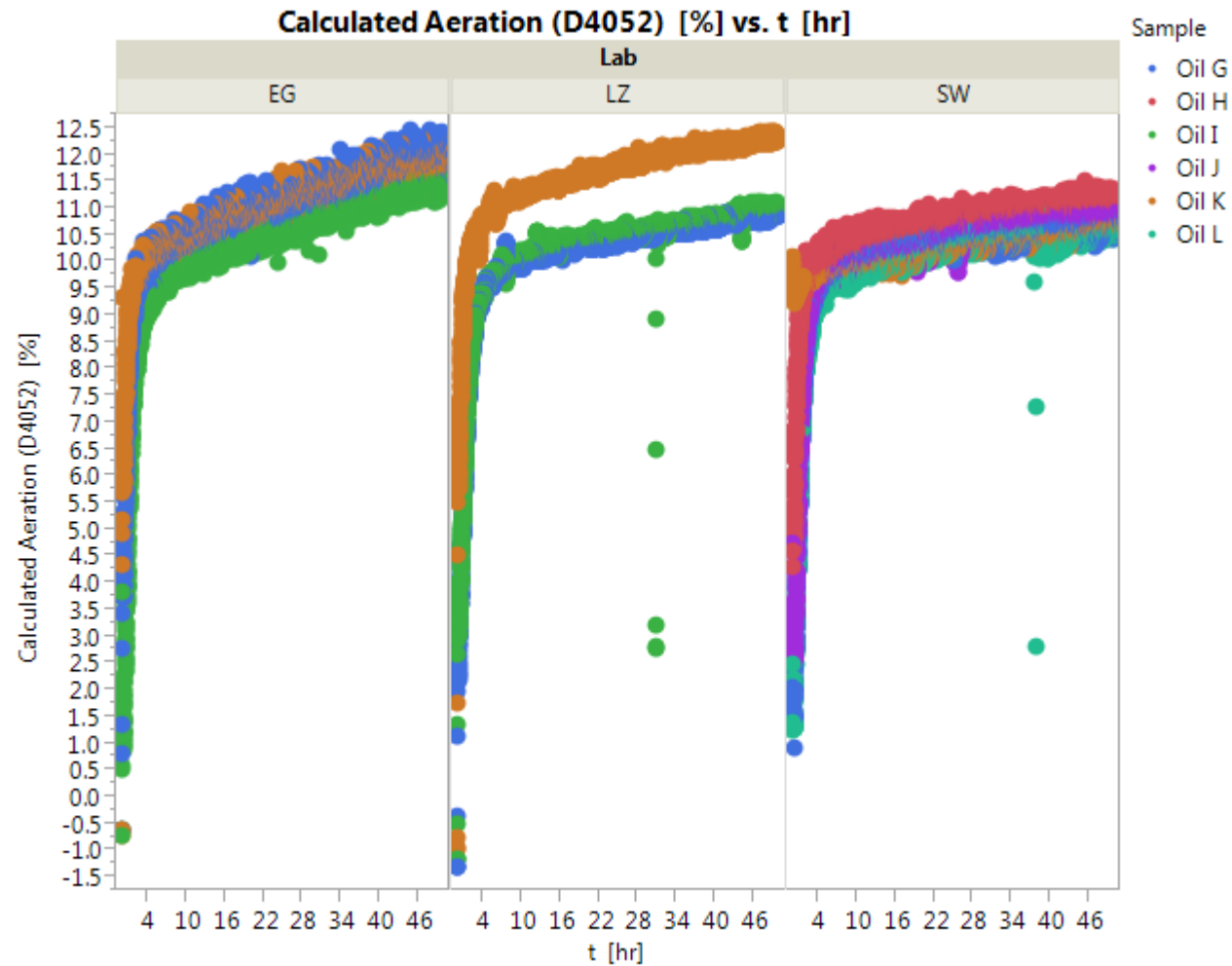
Silicon by Oil and Lab



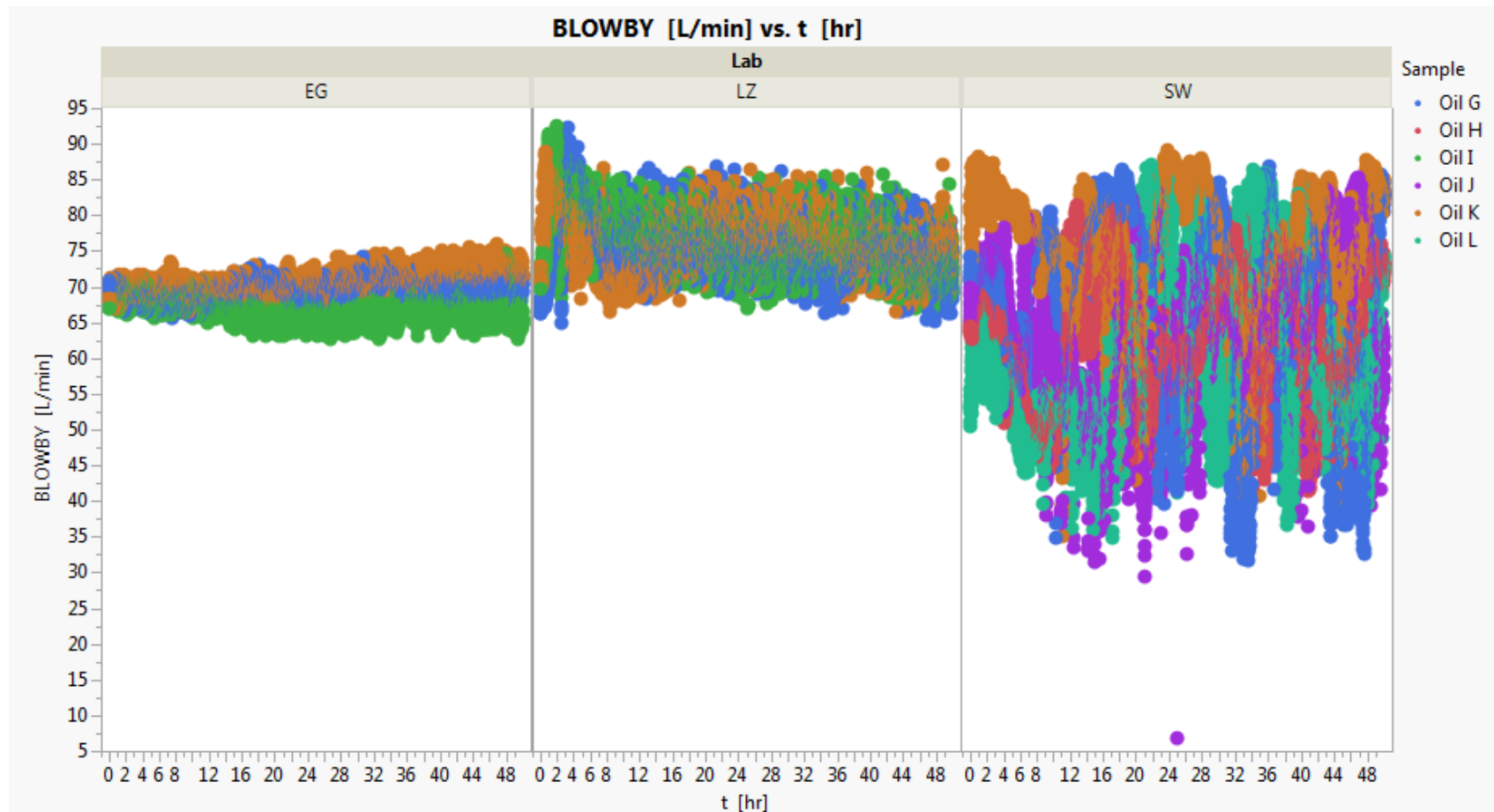
Aeration D4052



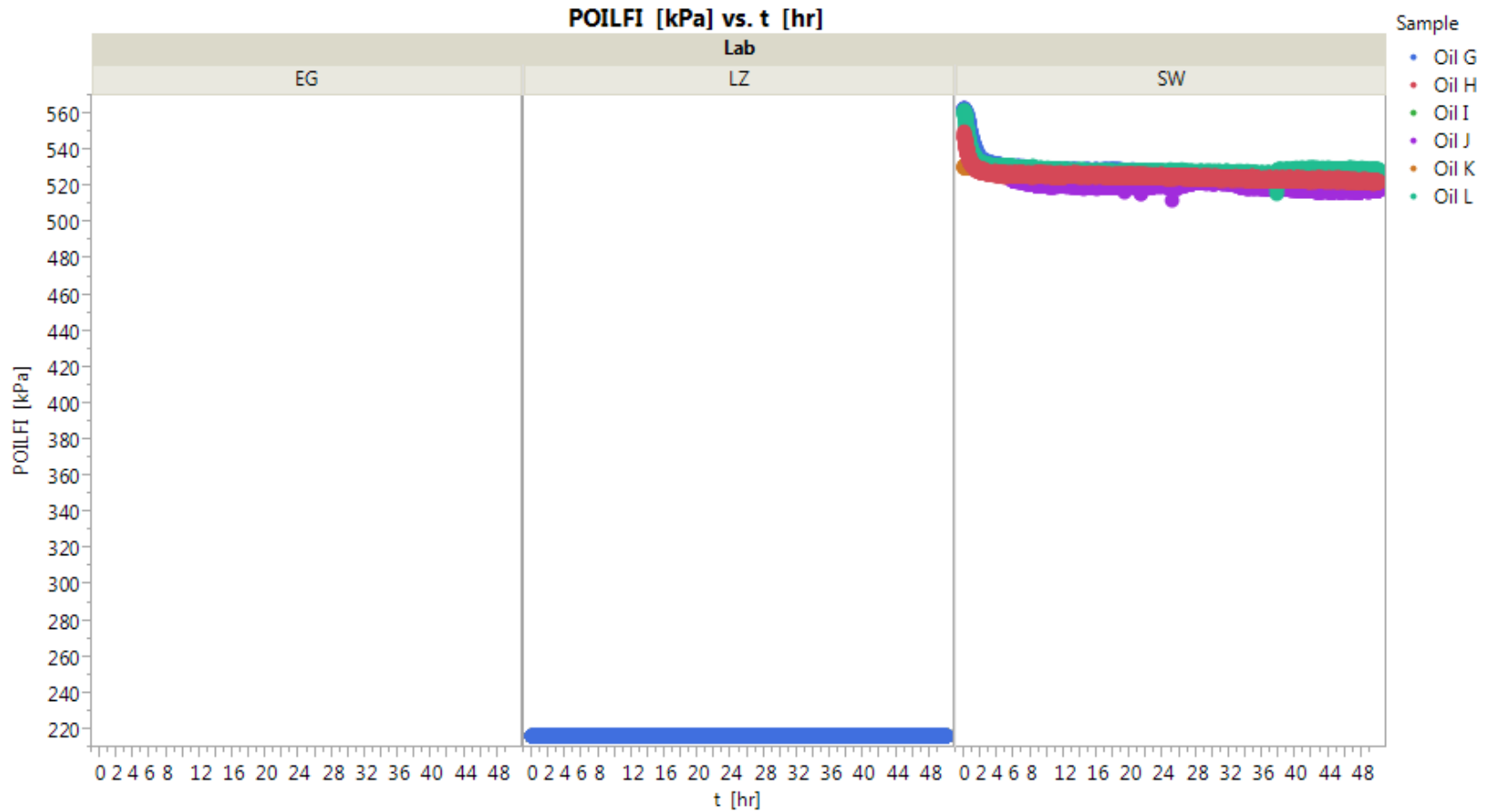
Aeration D4052 by Lab



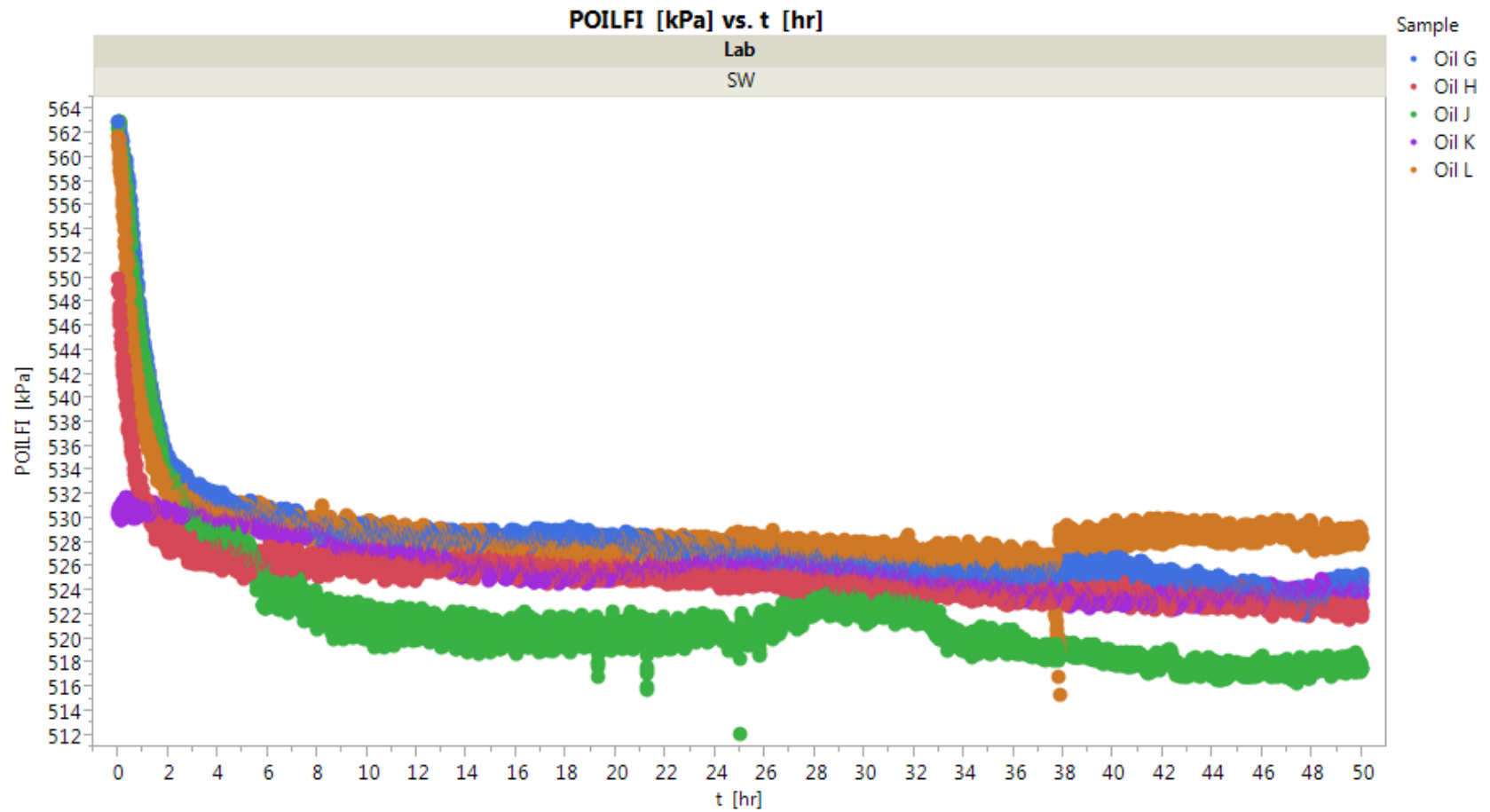
Where(Name("Calculated Aeration (D4052) [%]") >= -10 & Name("Calculated Aeration (D4052) [%]") <= 20)



Pressure Oil Filter In



Pressure Oil Filter In (SwRI)

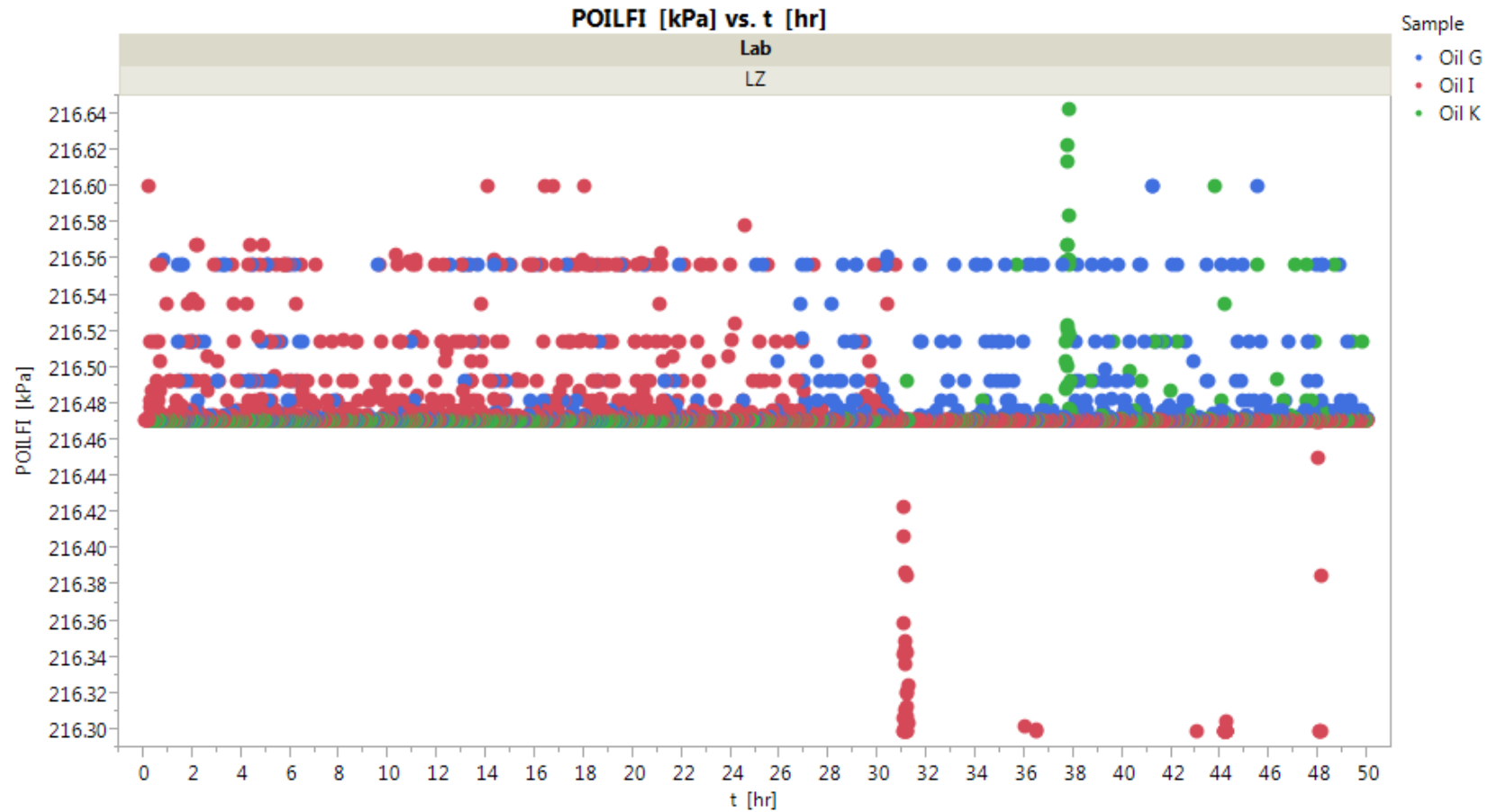


Where(Lab = SW)

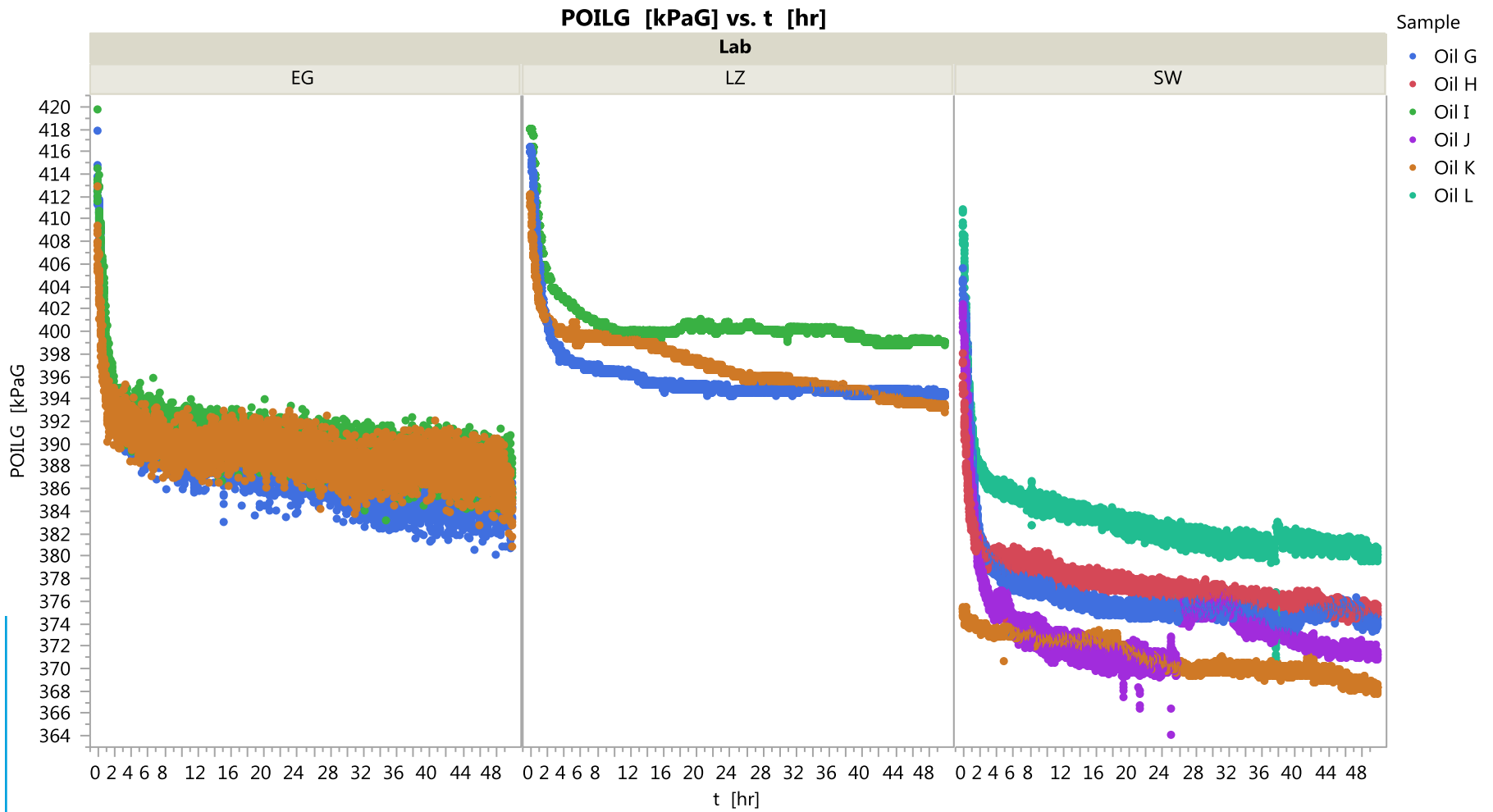
Pressure Oil Filter In (LZ)



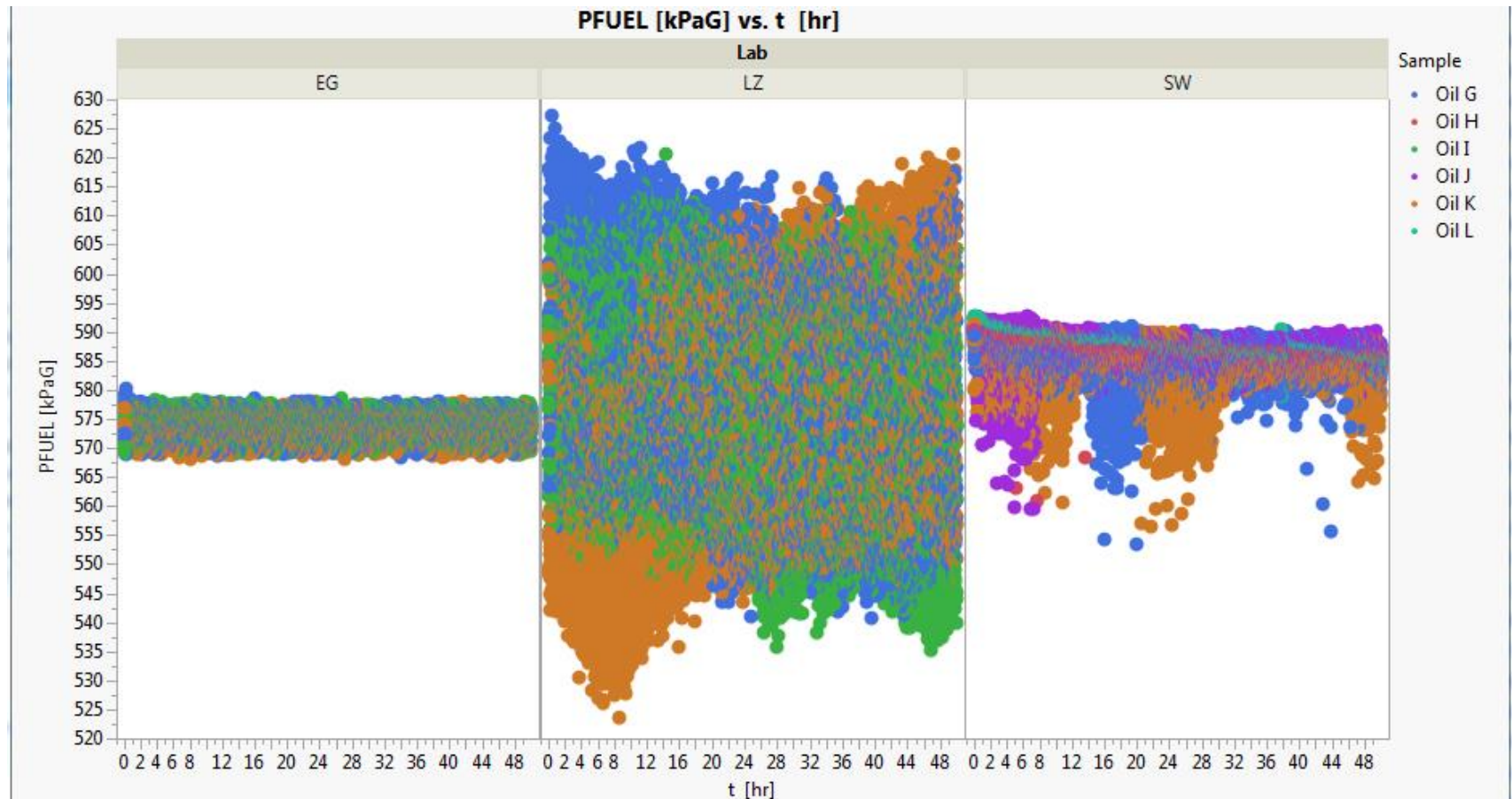
Graph Builder



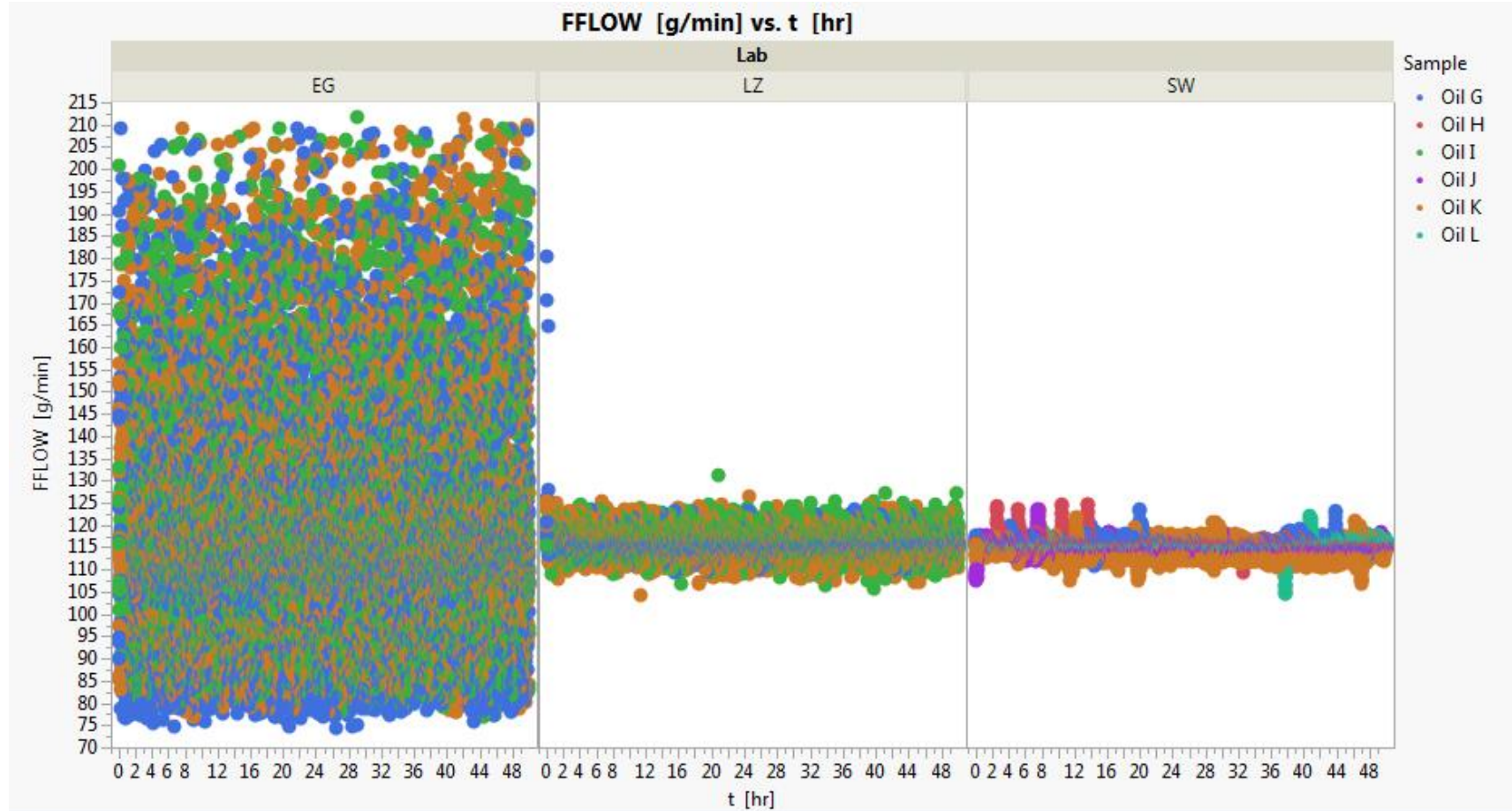
Pressure Oil Gallery



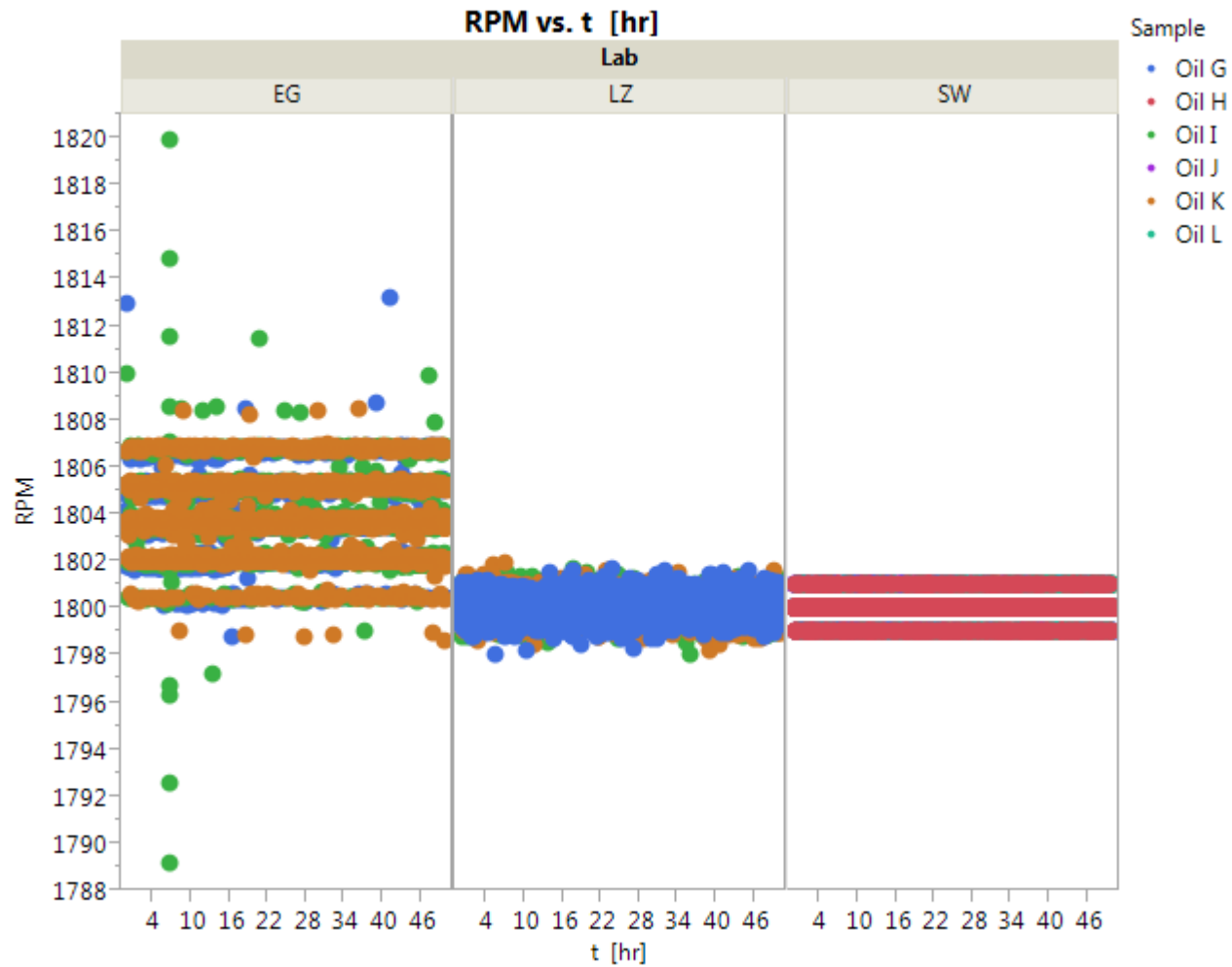
Fuel Pressure



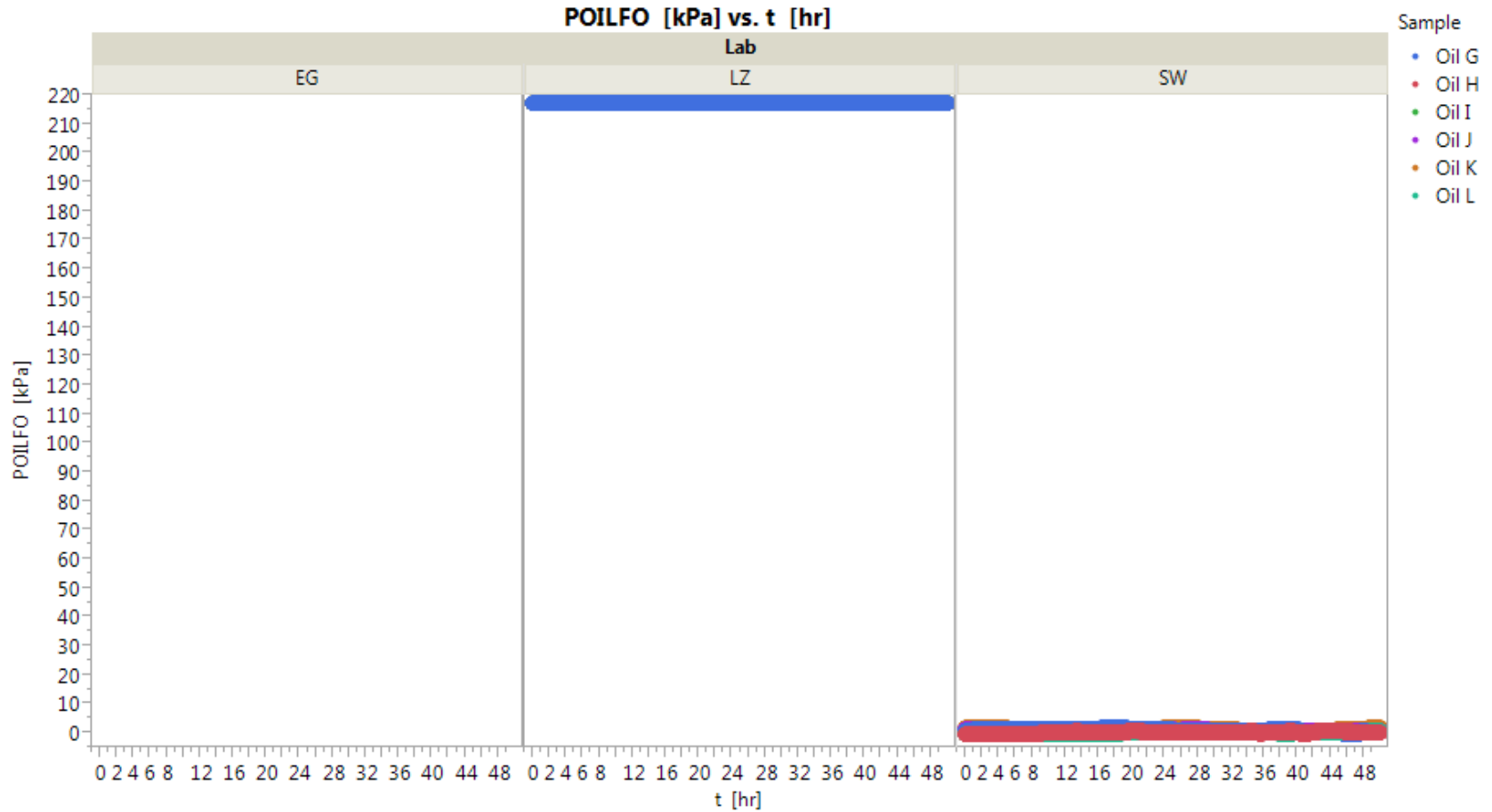
Fuel Flow



Engine Speed

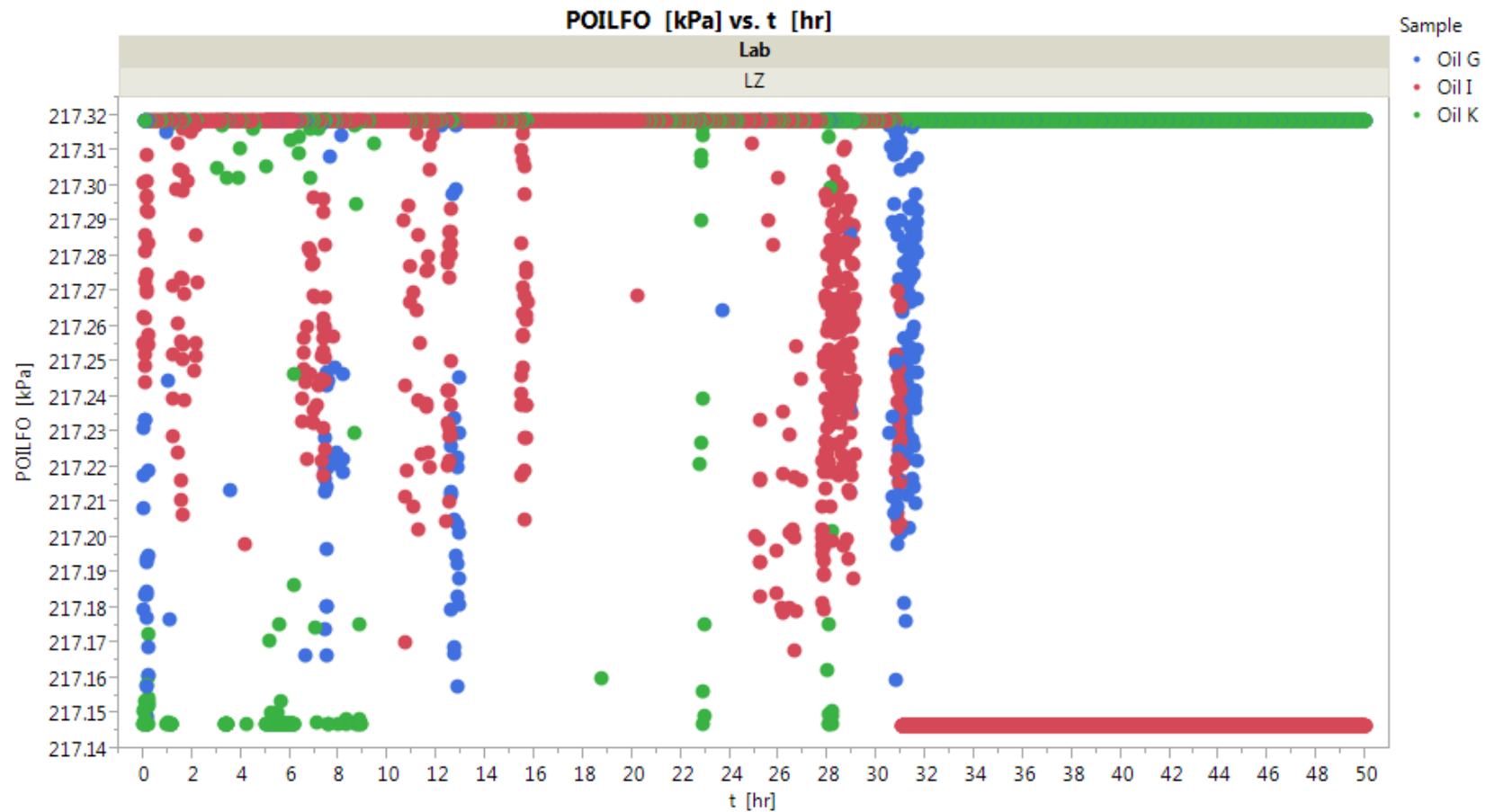


Pressure Oil Filter Out

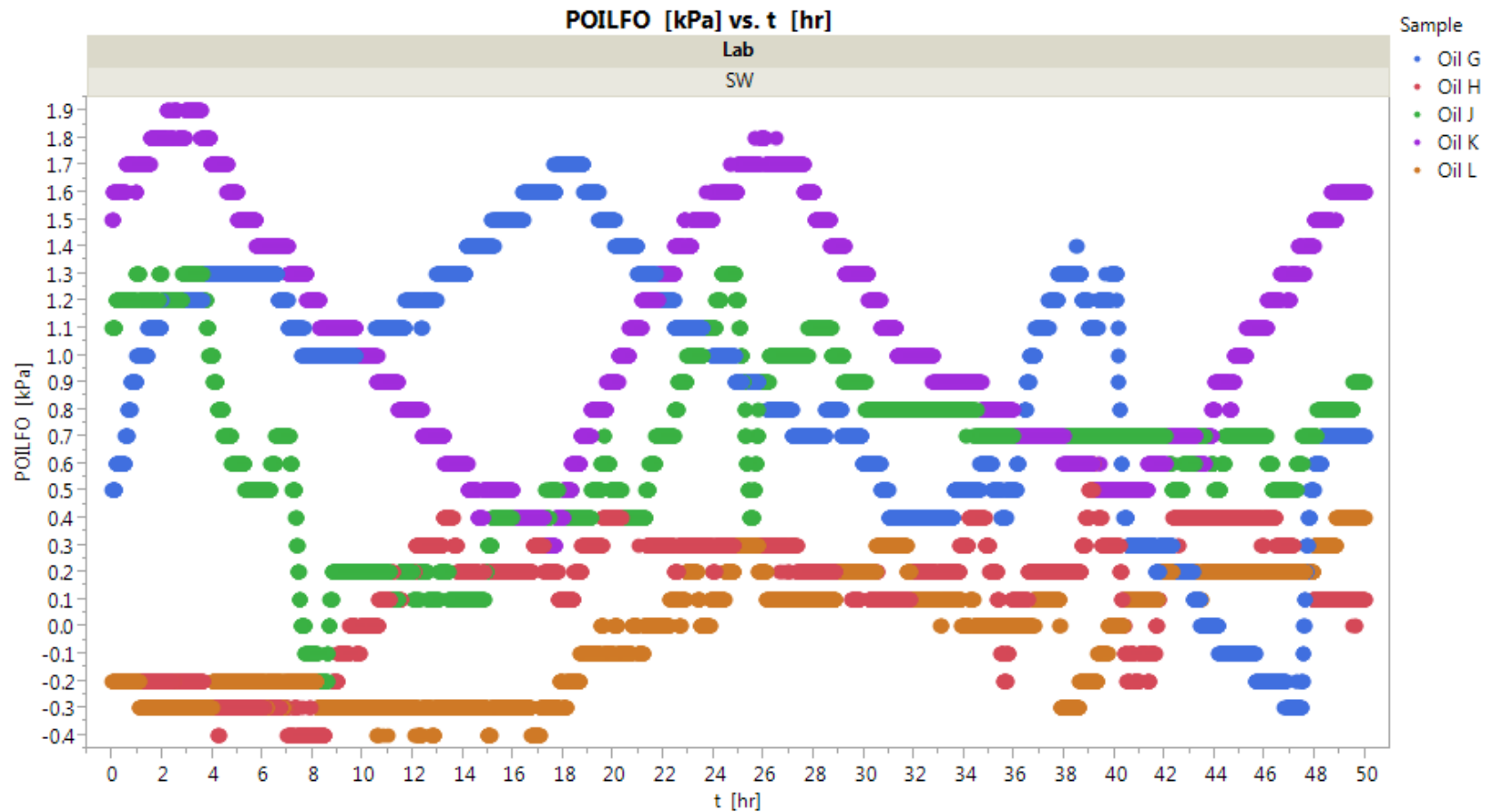


Pressure Oil Filter Out (LZ)

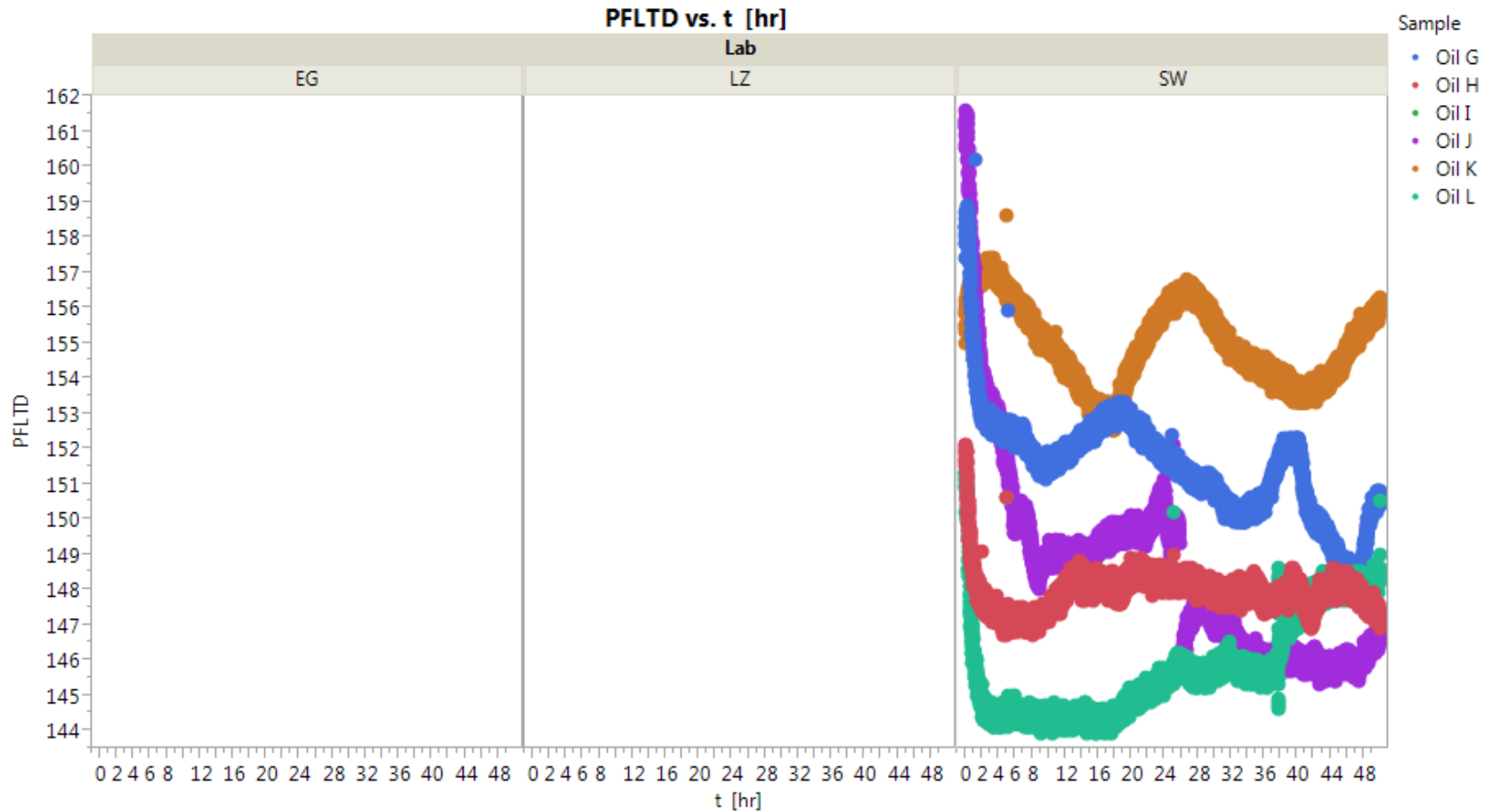
Graph Builder



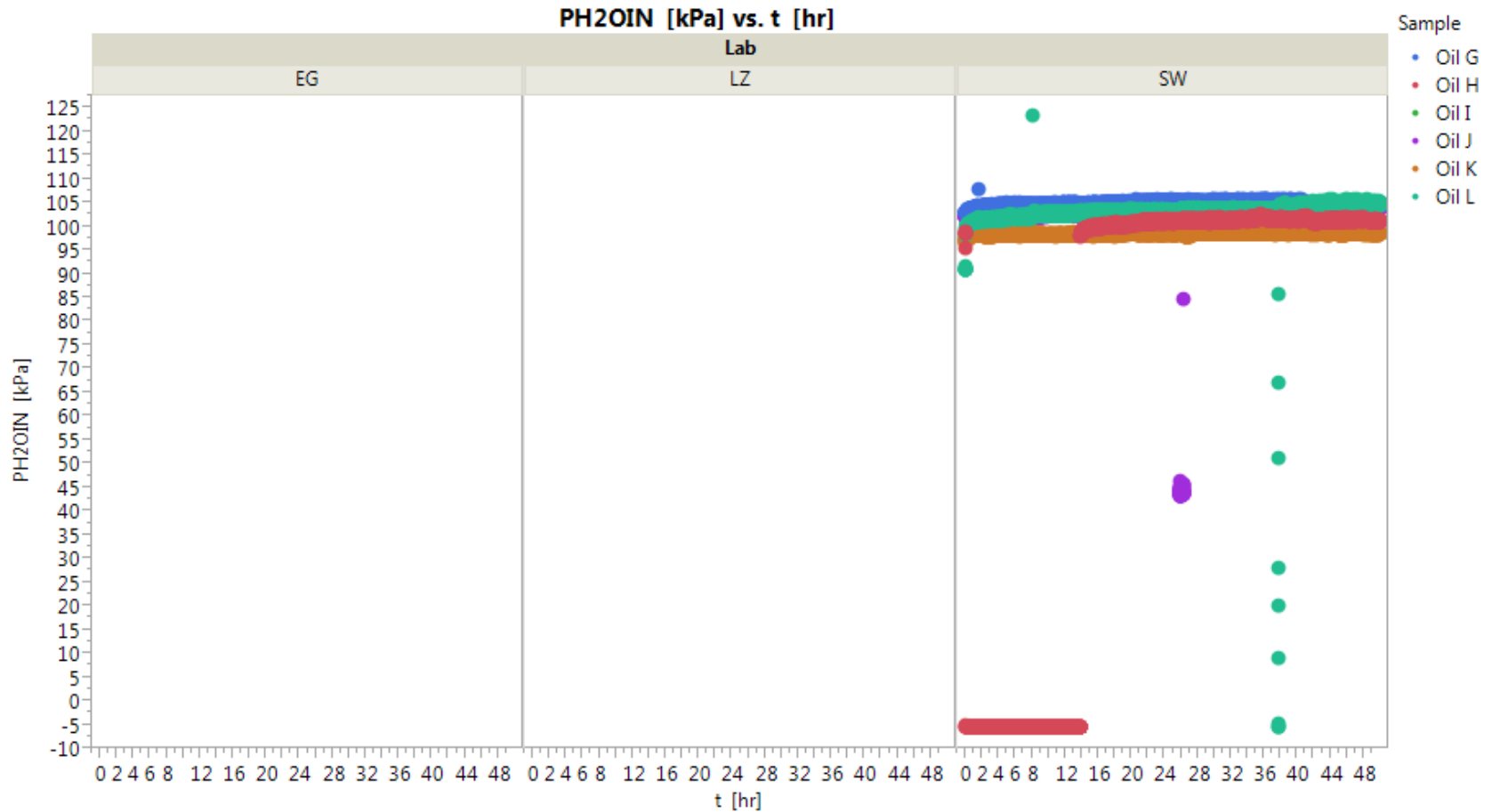
Pressure Oil Filter Out (SwRI)



Filter pressure delta



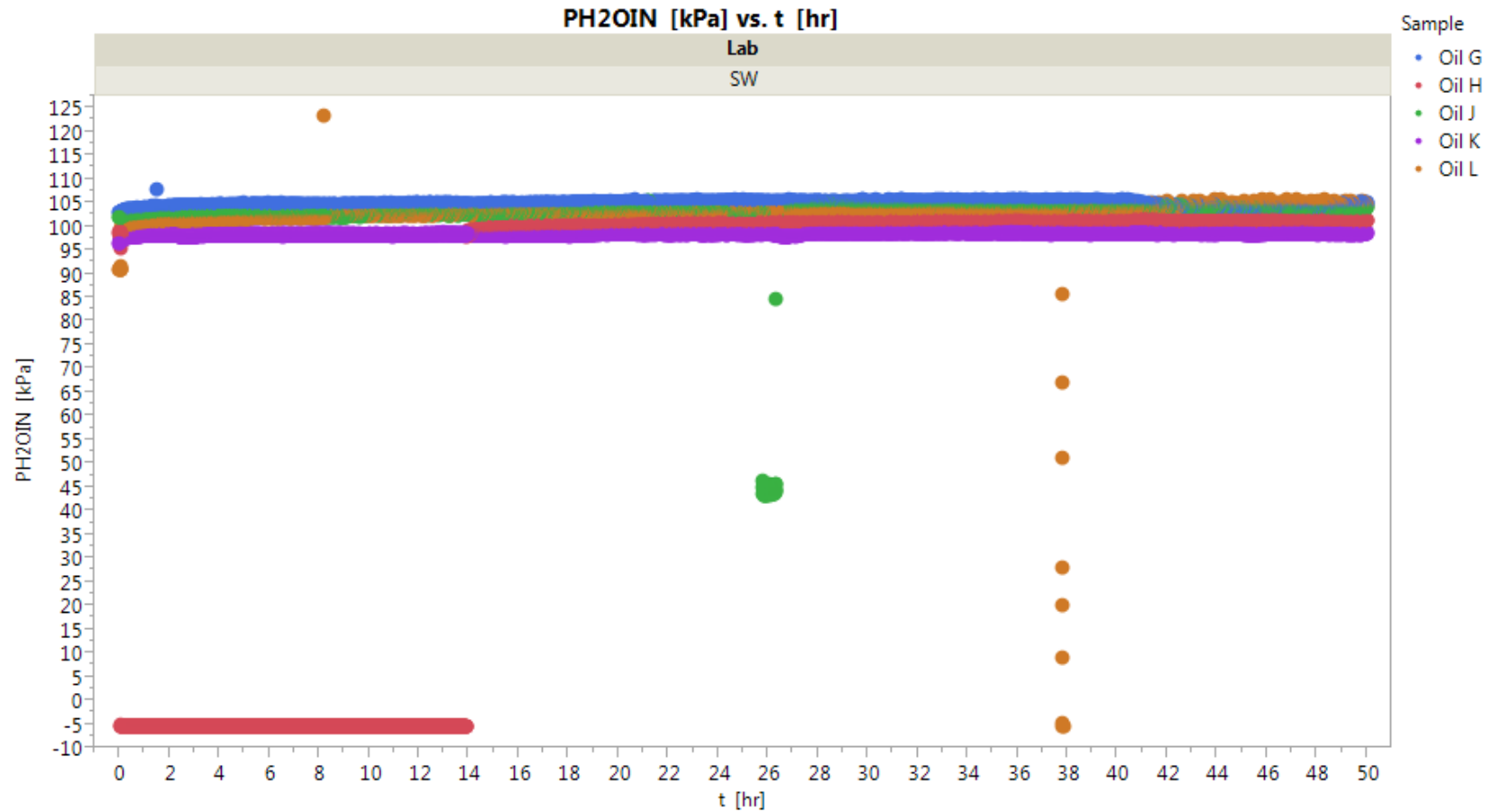
Coolant In Pressure



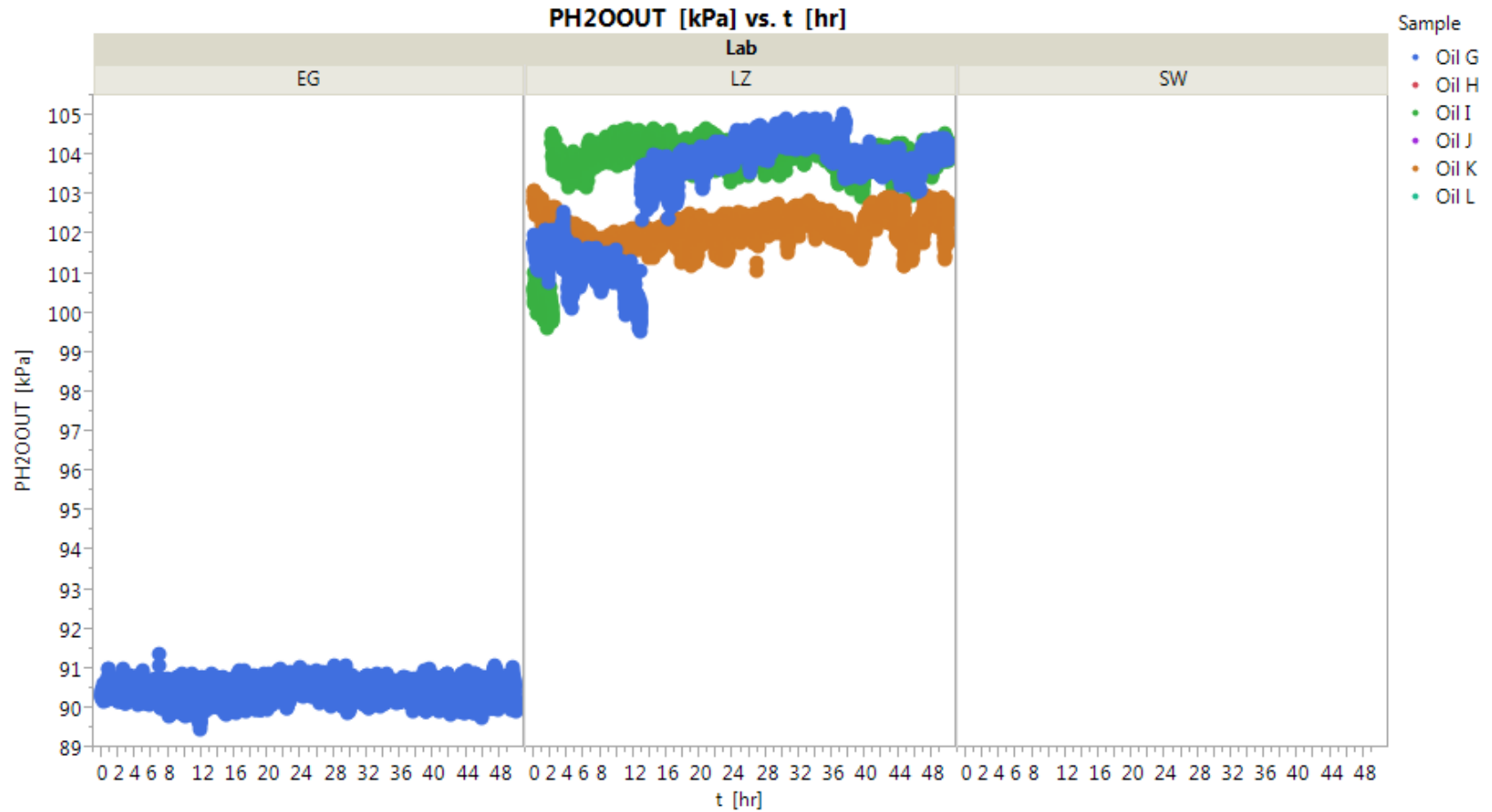
Coolant In Pressure (SwRI)



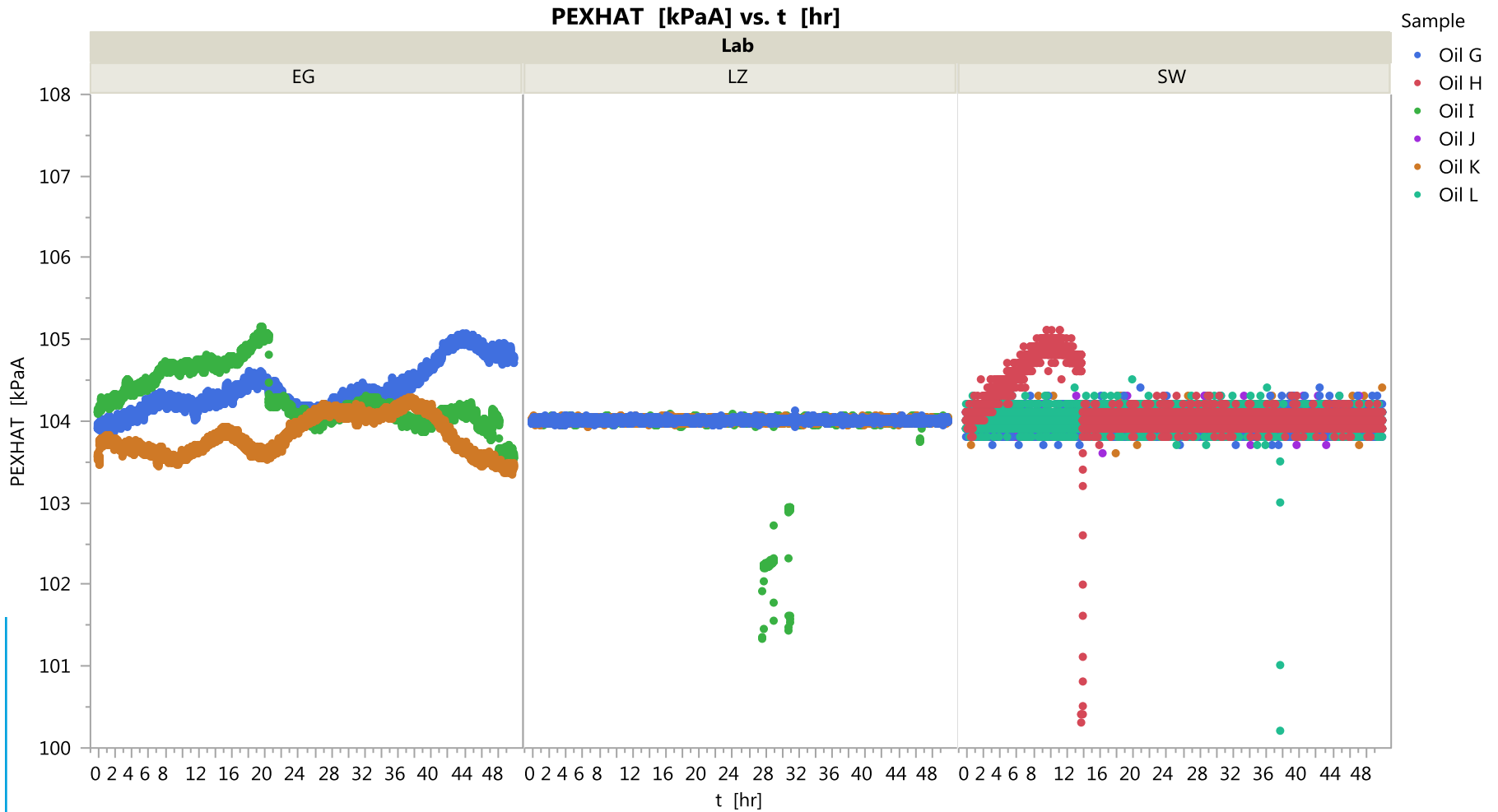
Graph Builder



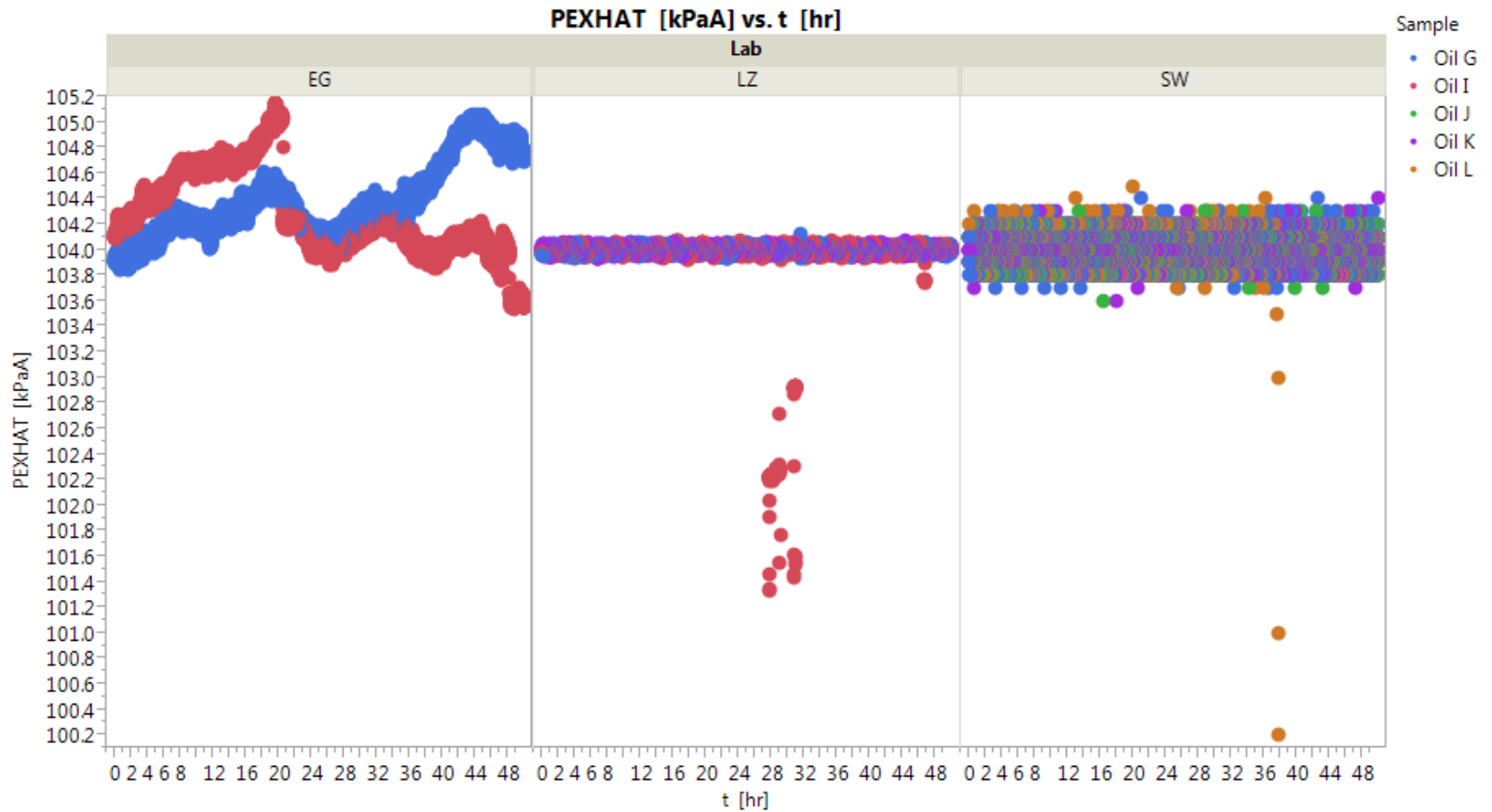
Coolant Out Pressure



Exhaust Pressure

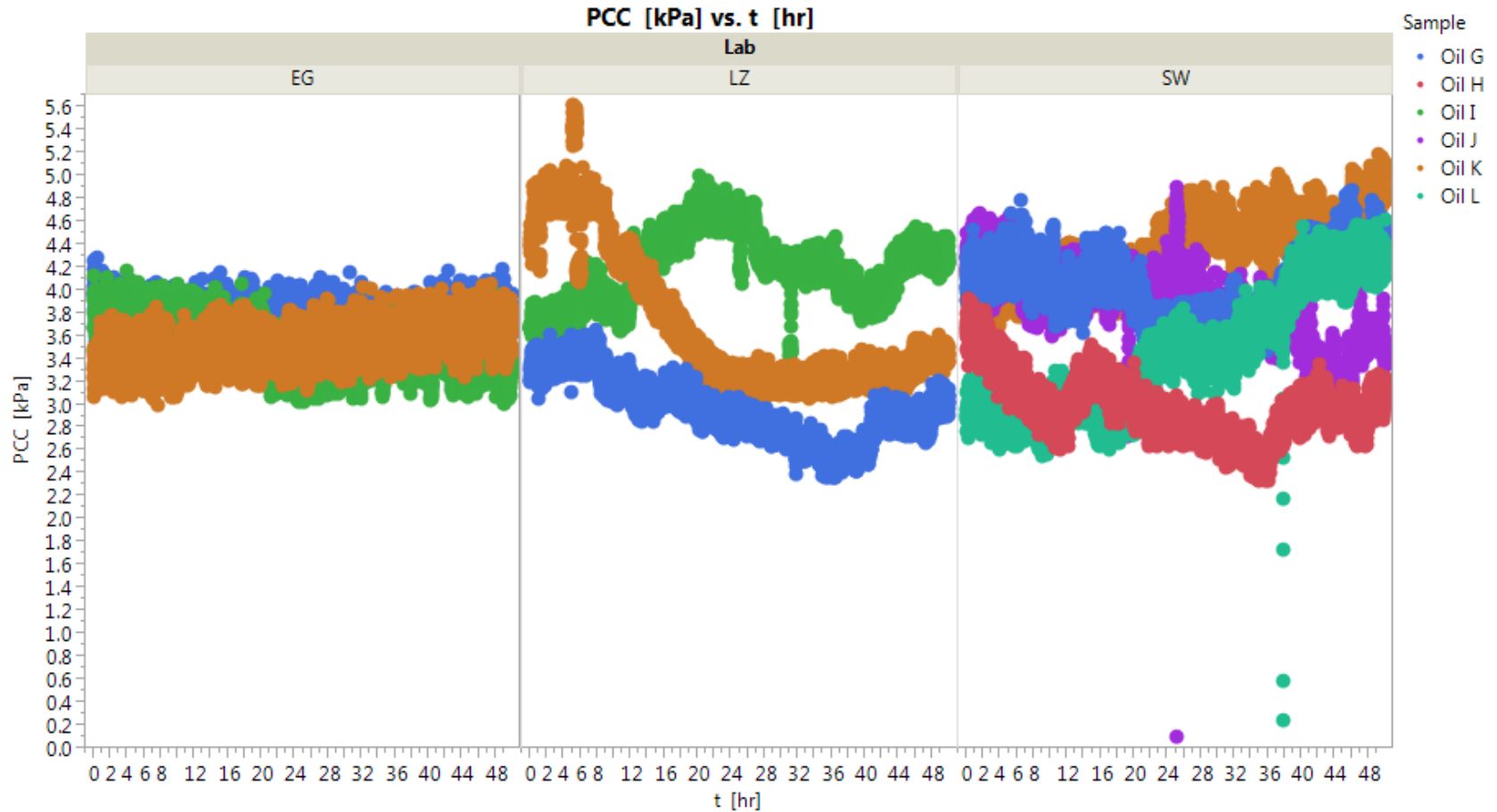


Exhaust pressure

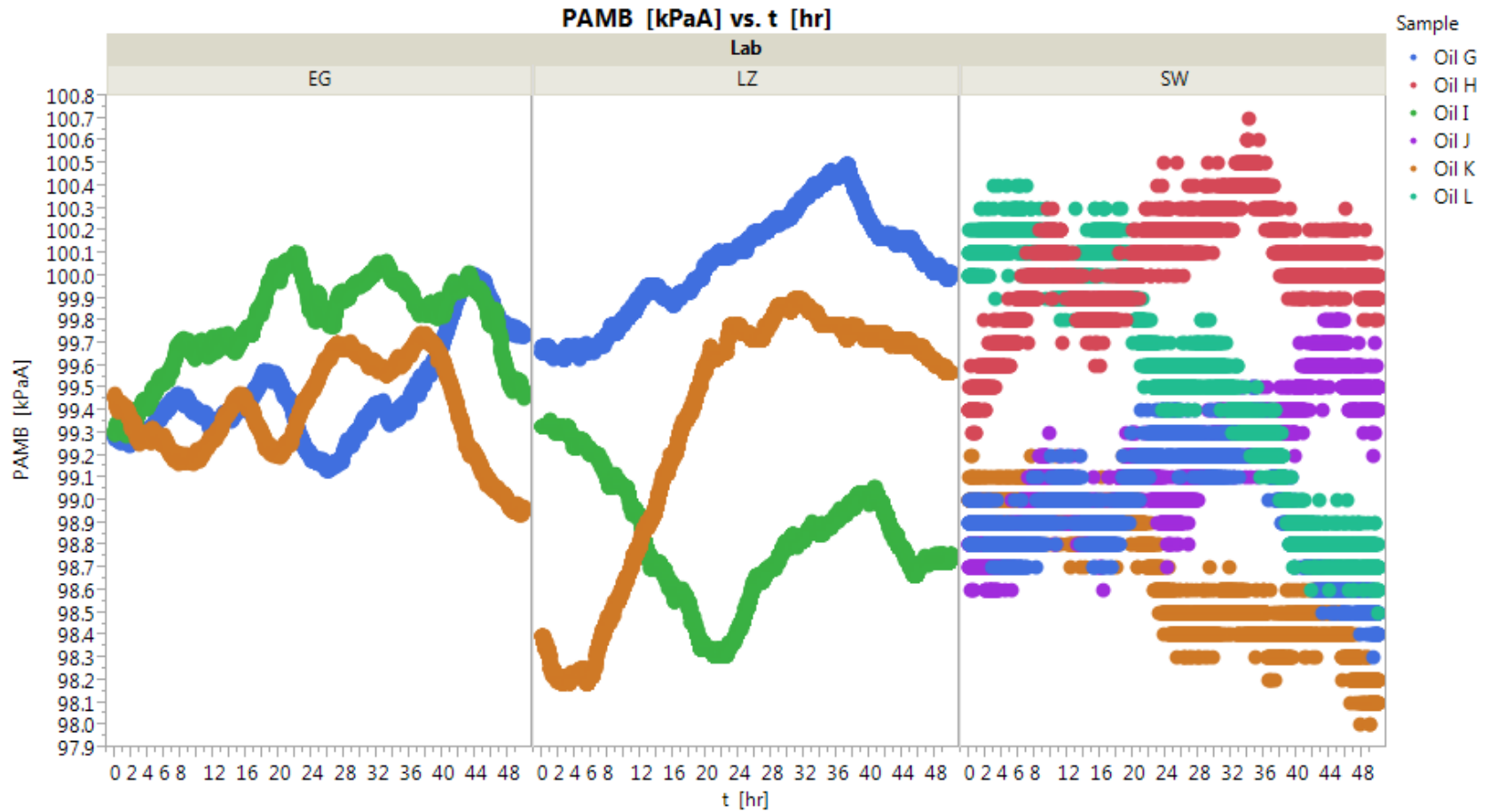


Where(Name("PEXHAT [kPaA]") >= 100 & Name("PEXHAT [kPaA]") <= 105.14551)

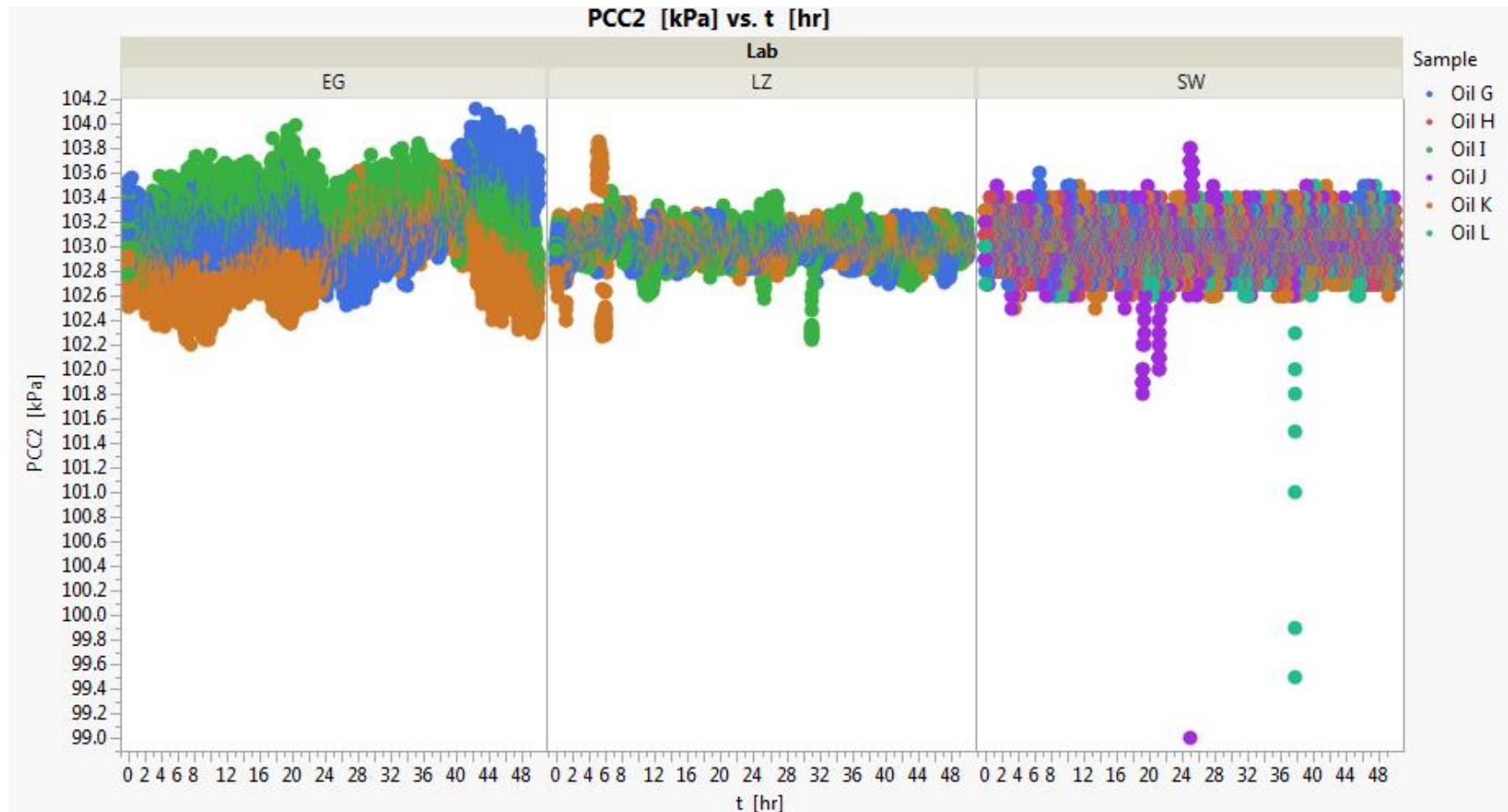
Crankcase pressure (gauge)



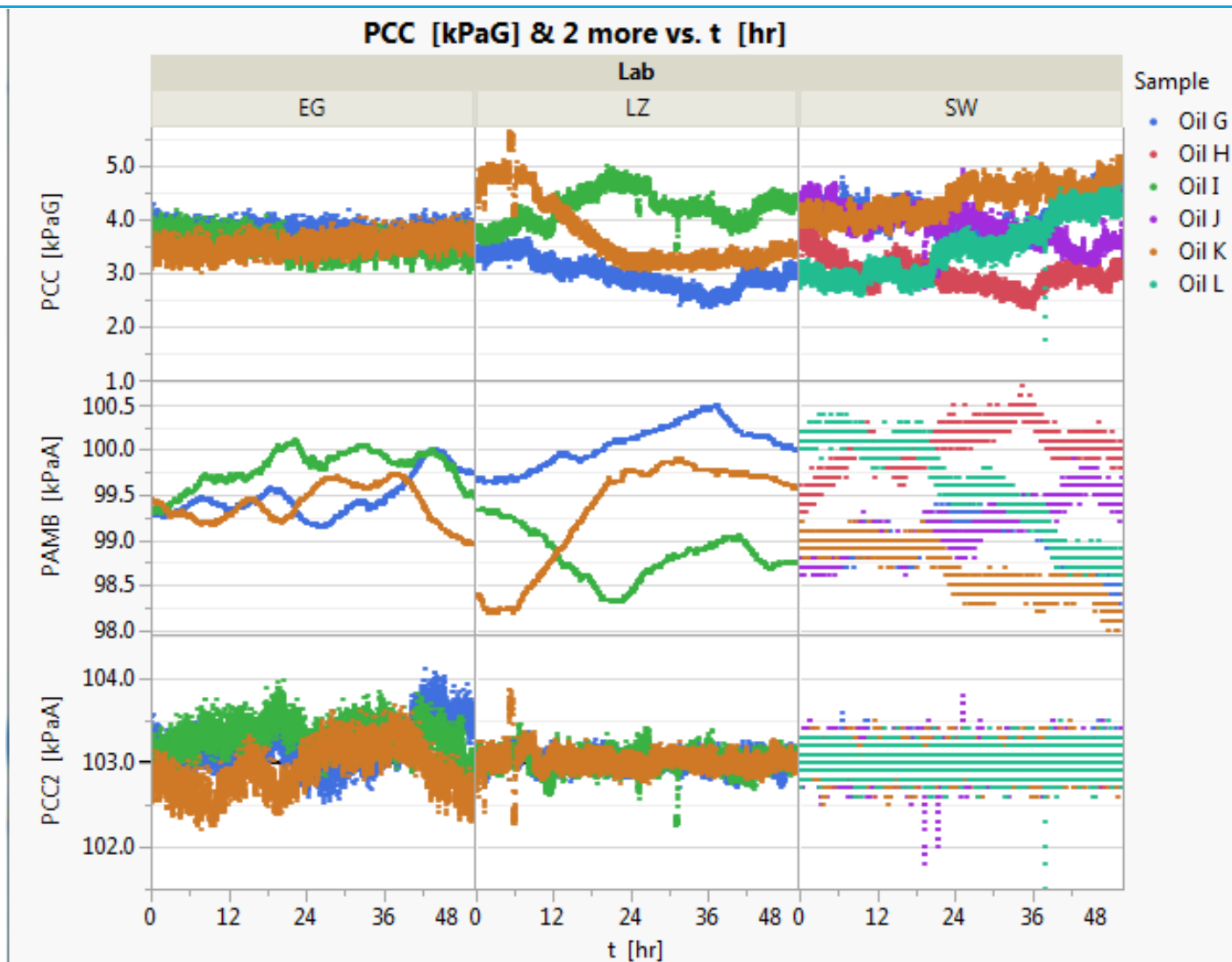
Ambient Pressure



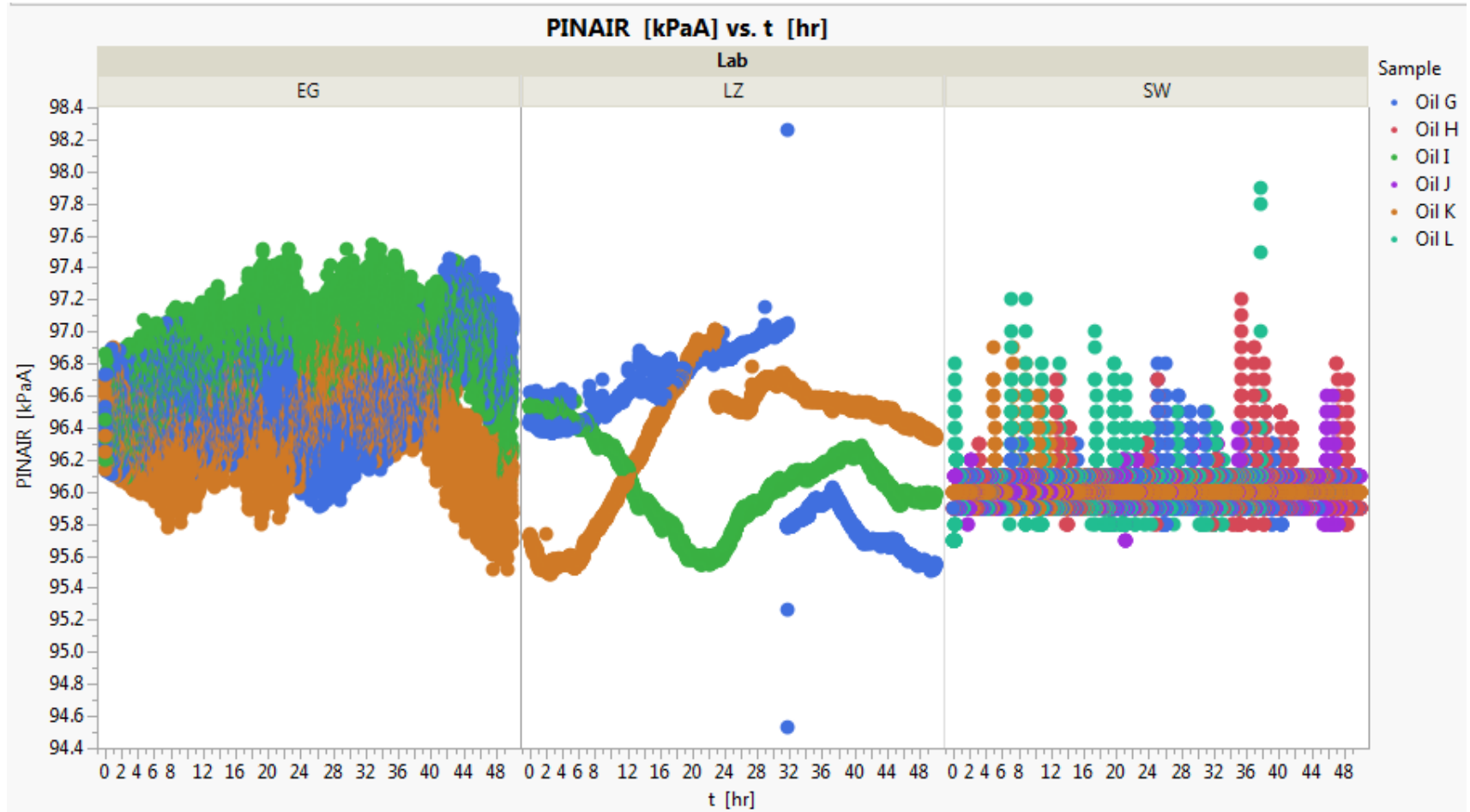
Crankcase Pressure (Absolute)



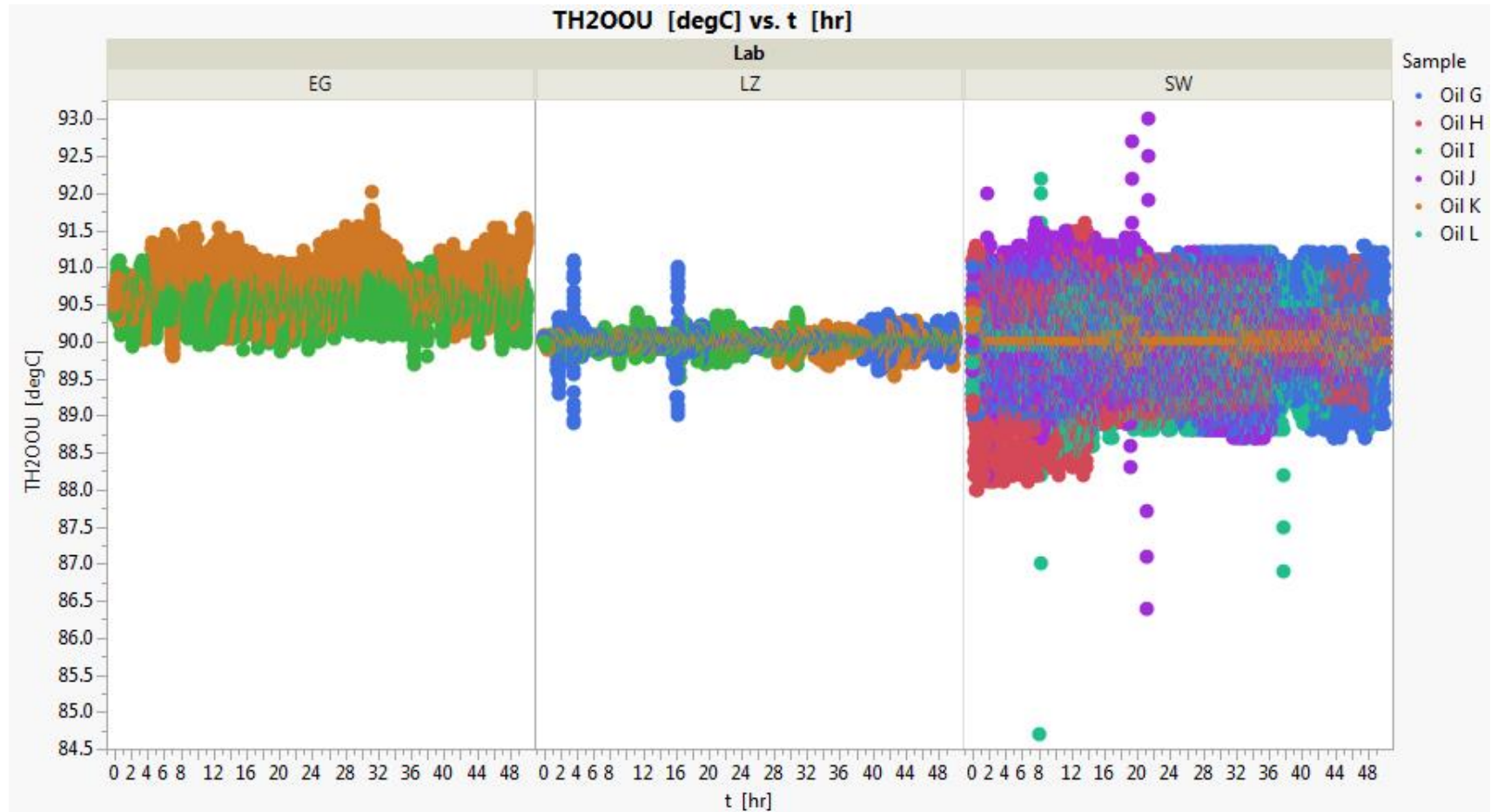
Crankcase pressure (G, A) and Ambient pressure



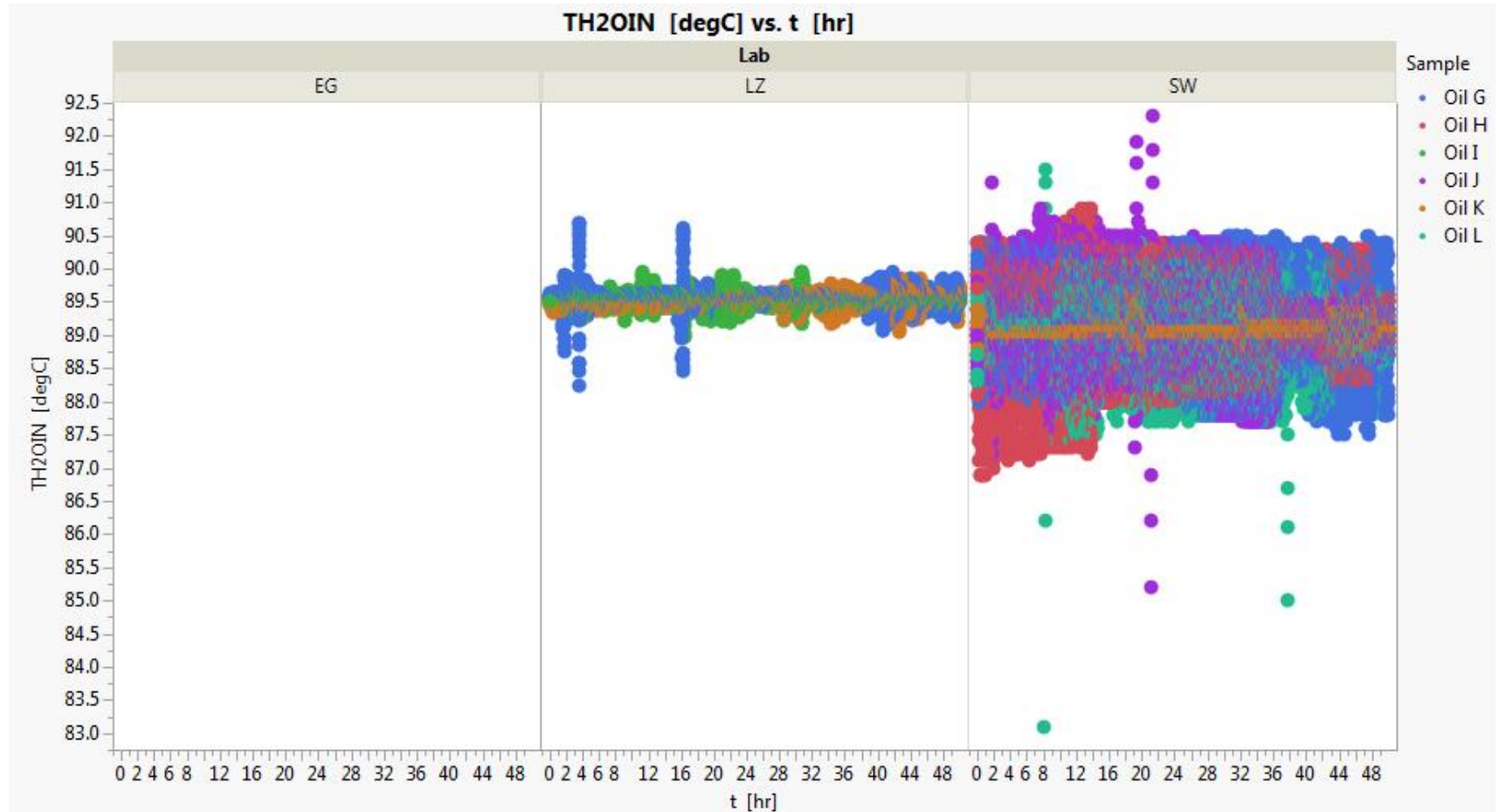
Intake Air Pressure



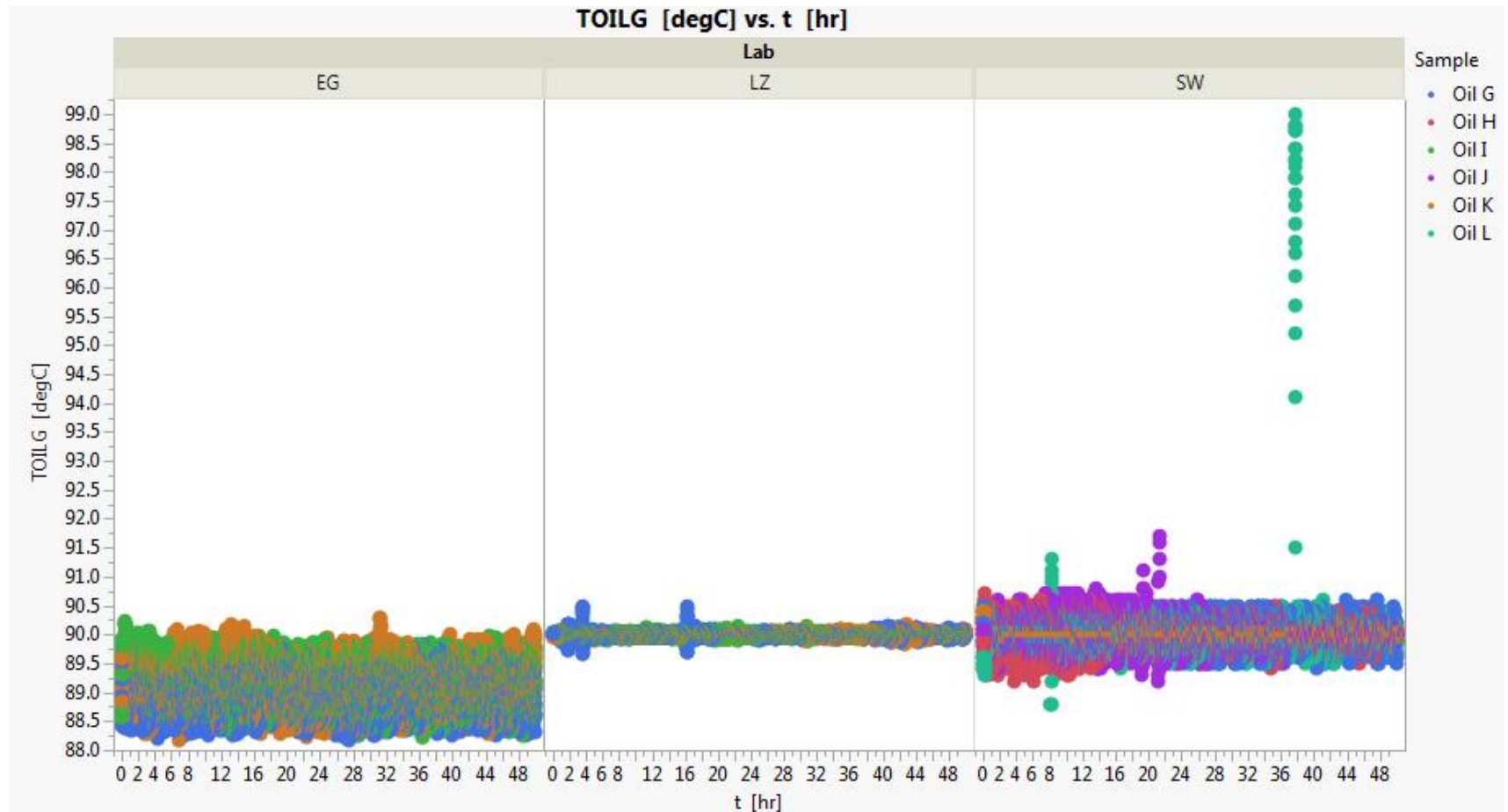
Coolant Out Temperature



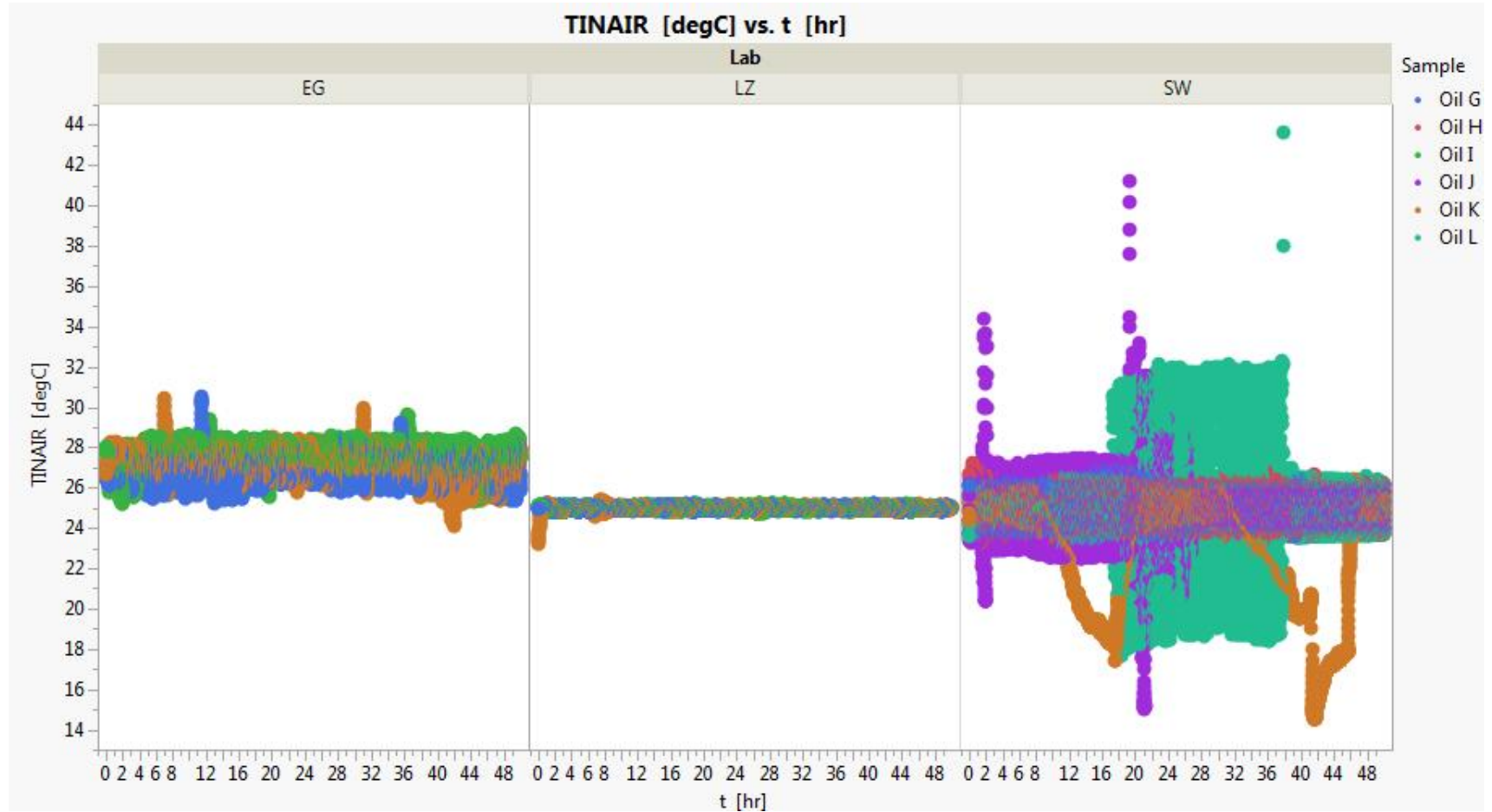
Coolant In Temperature



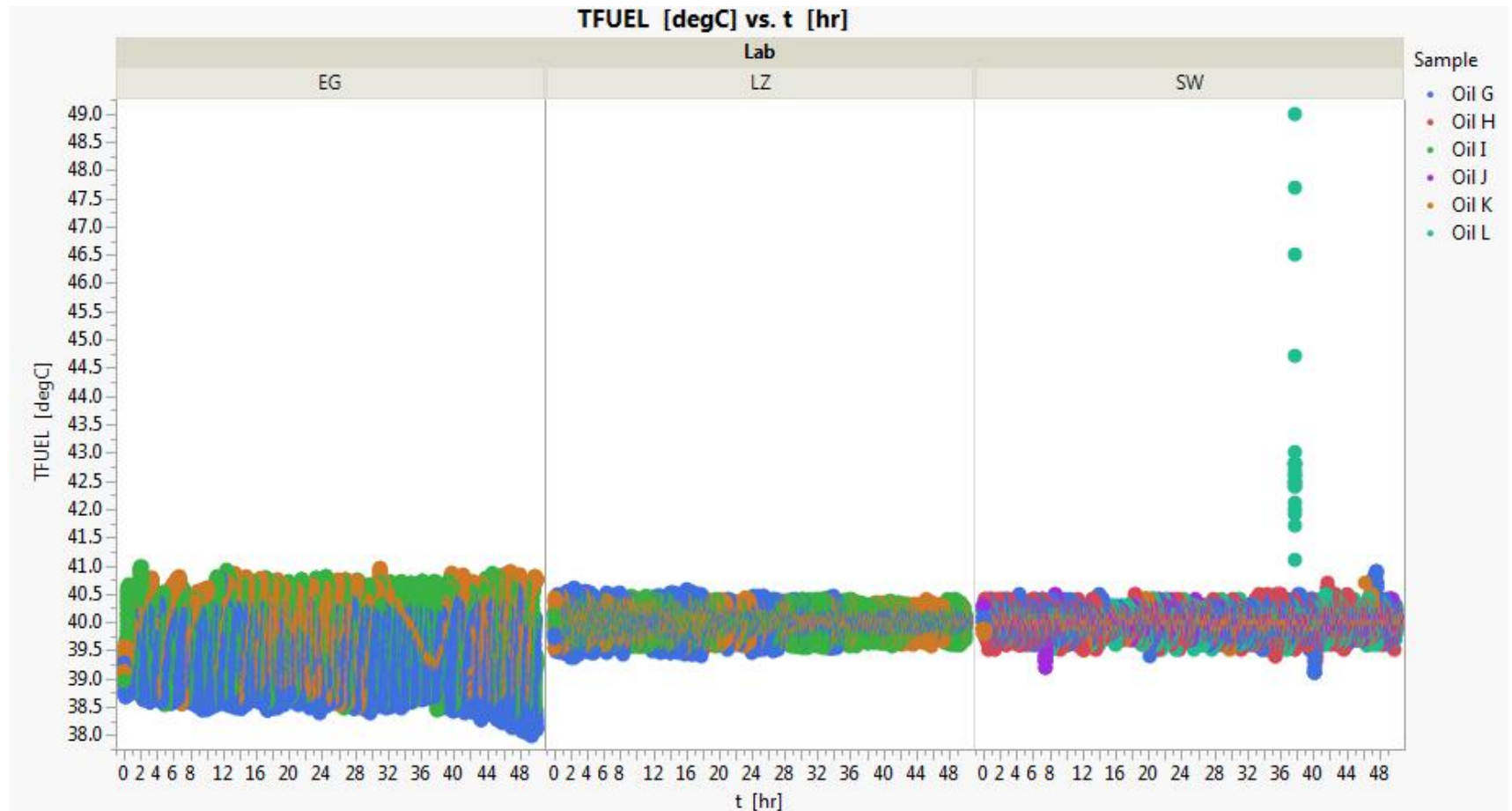
Oil Gallery Temperature



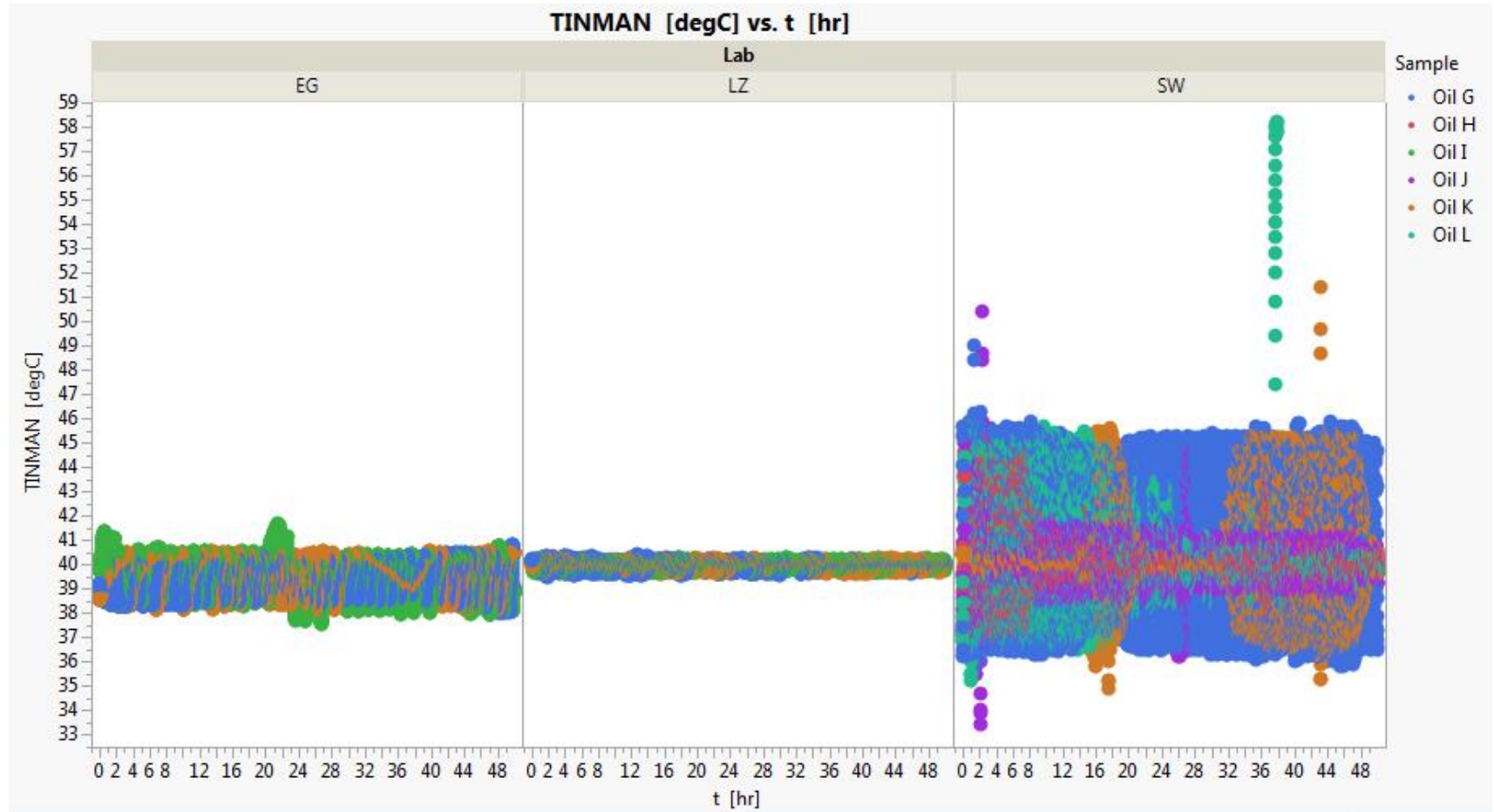
Intake Air Temperature



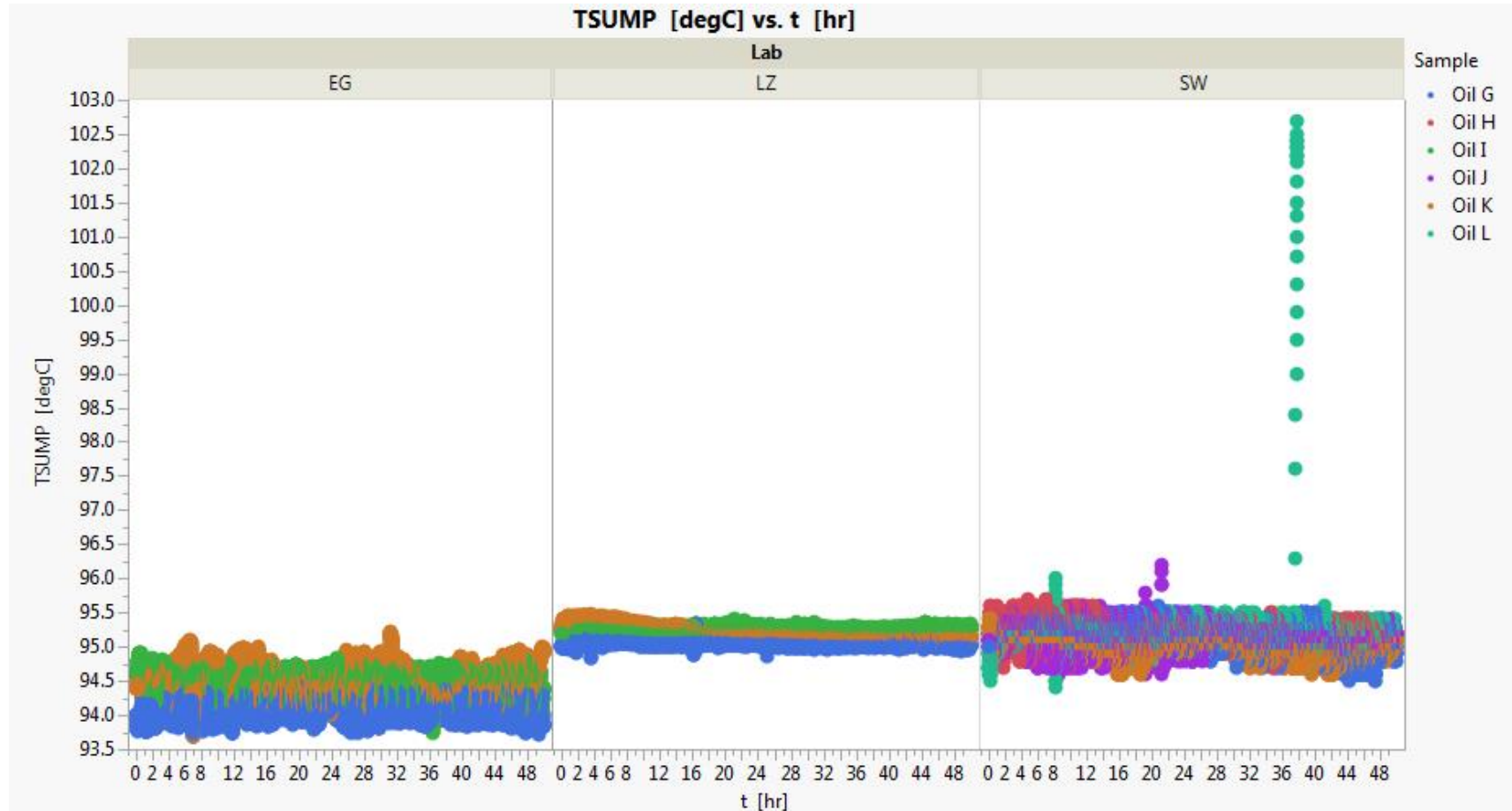
Fuel Temperature



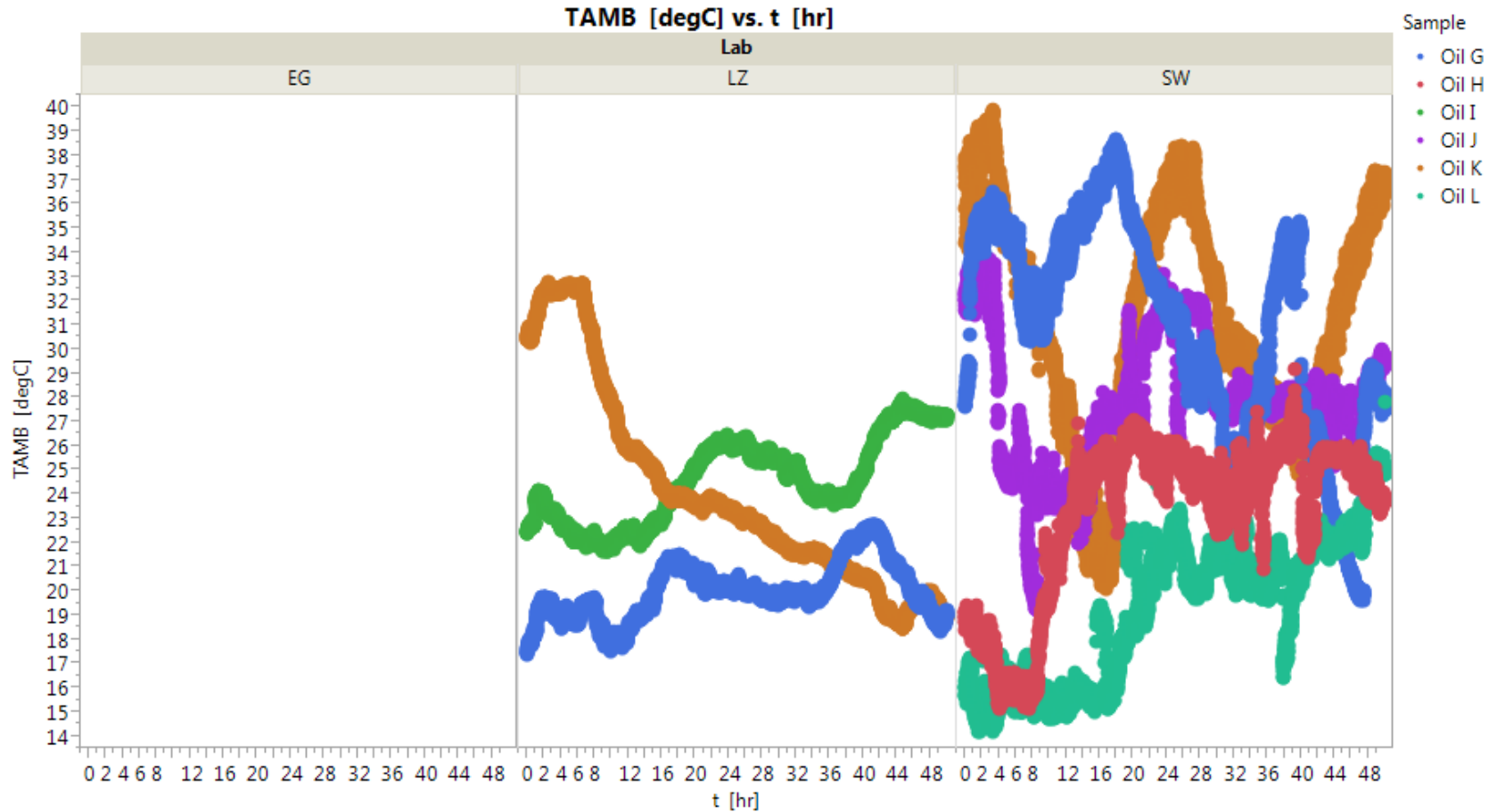
Intake Manifold temperature



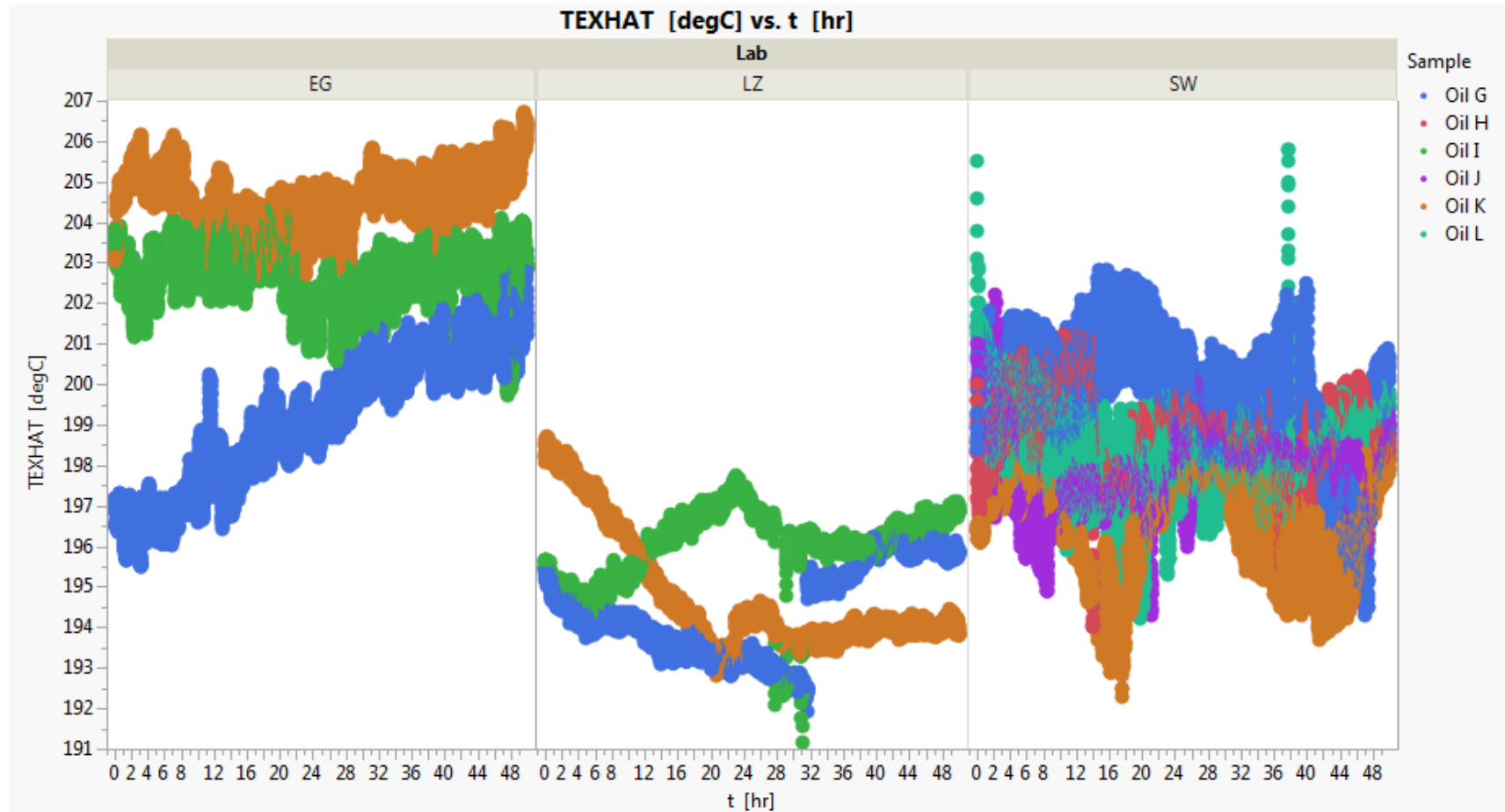
Sump Temperature



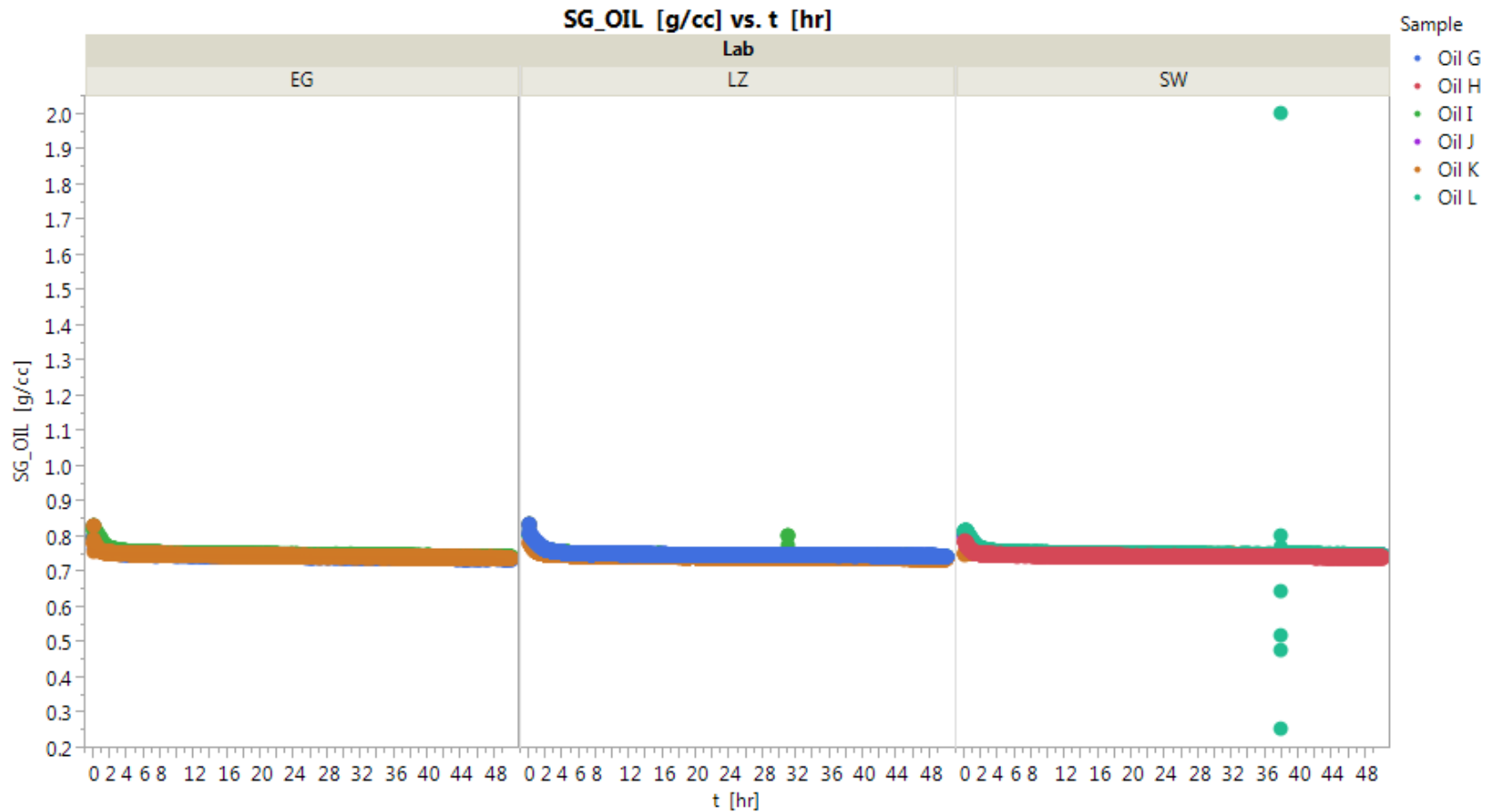
Ambient Temperature



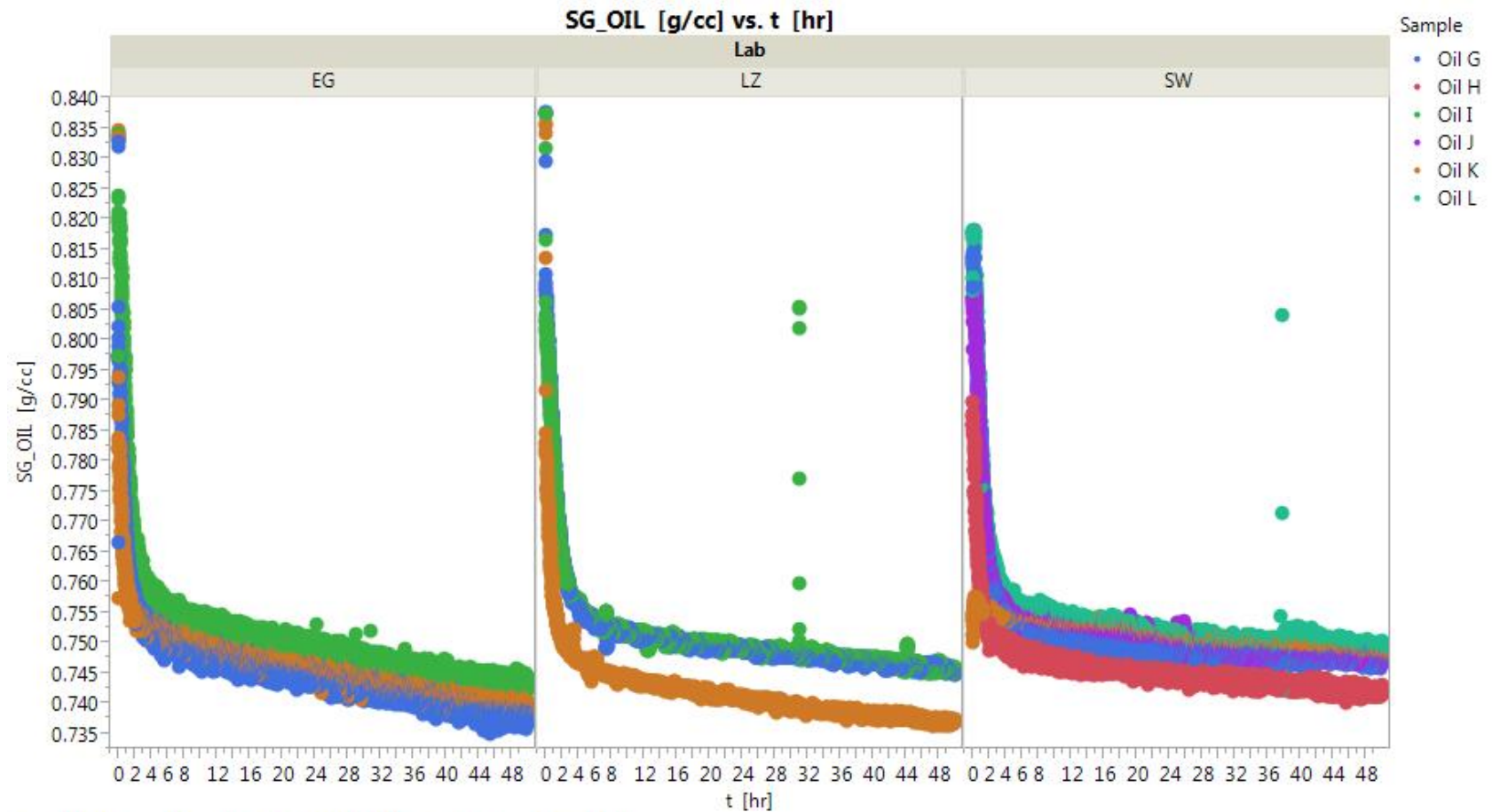
Exhaust Temperature



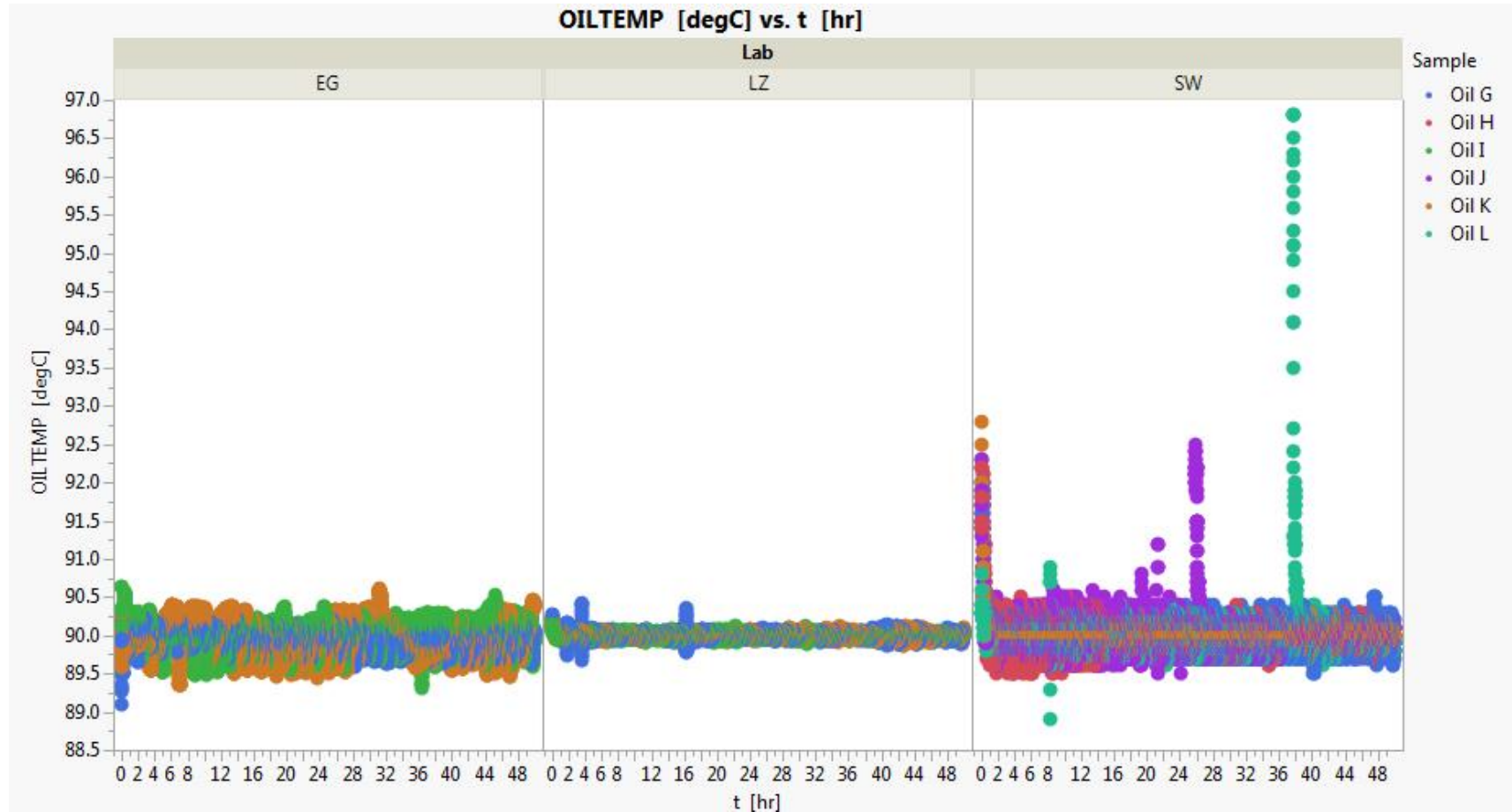
Oil sample density



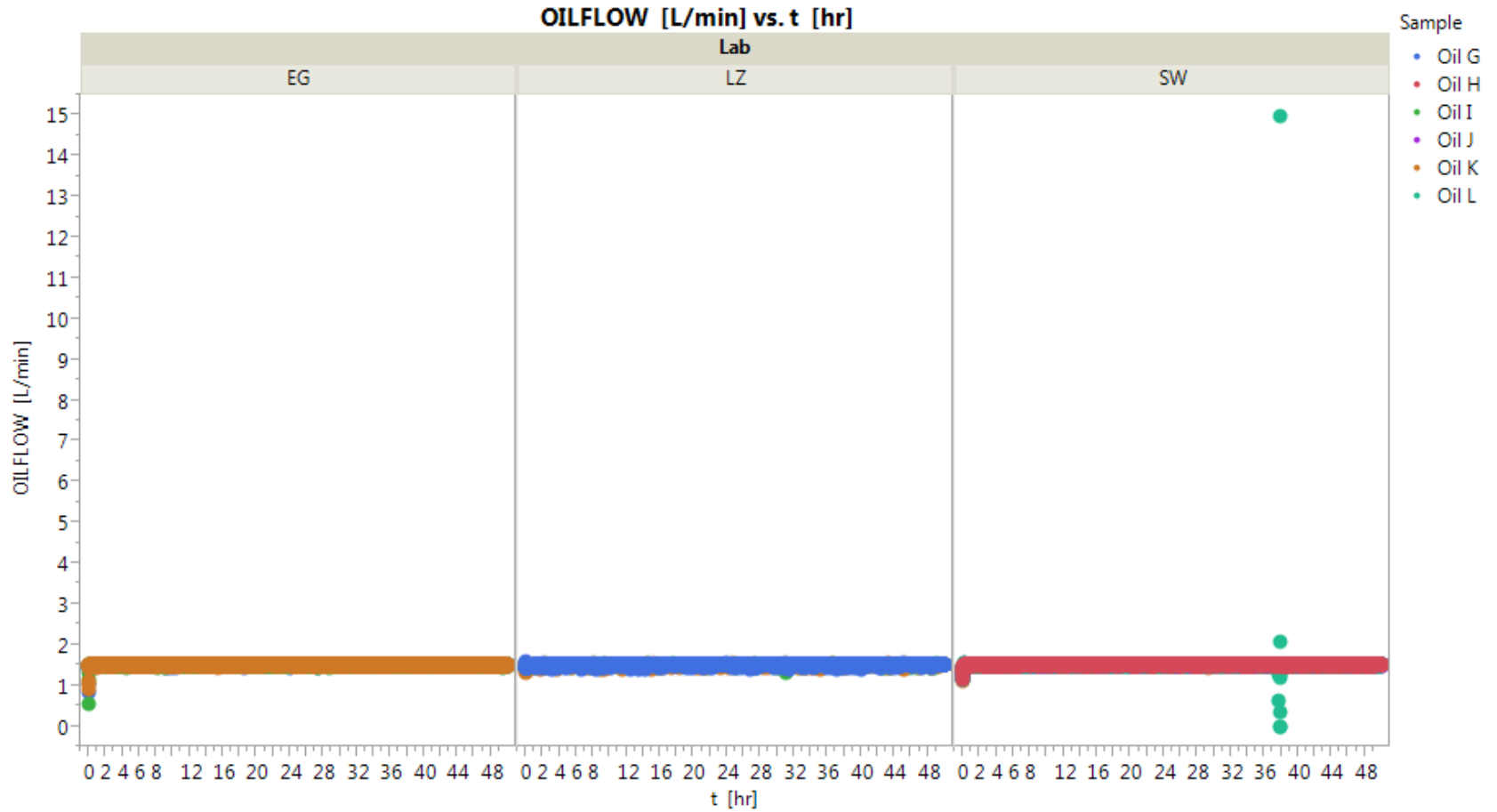
Oil sample density



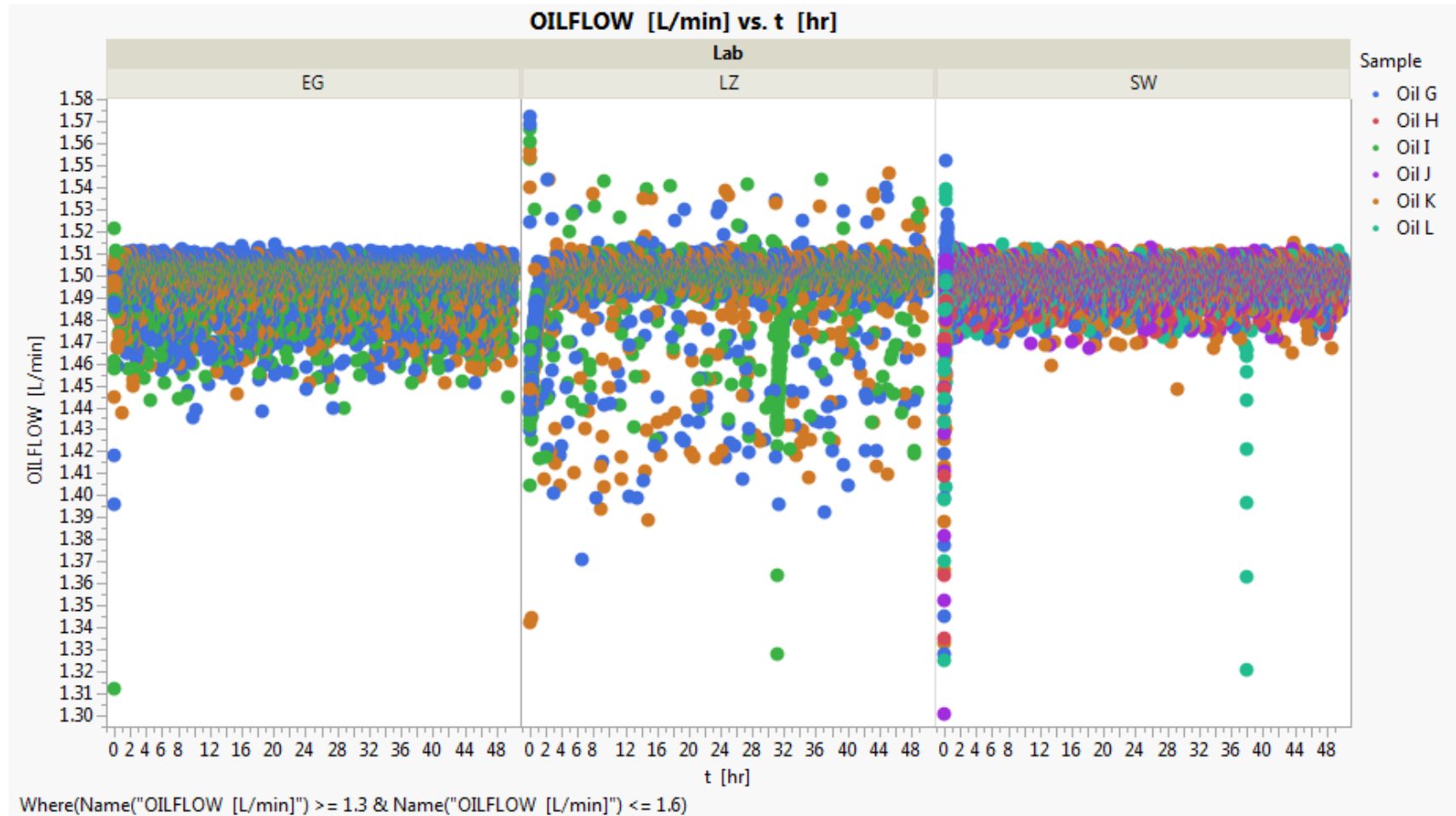
Oil Sample Temperature



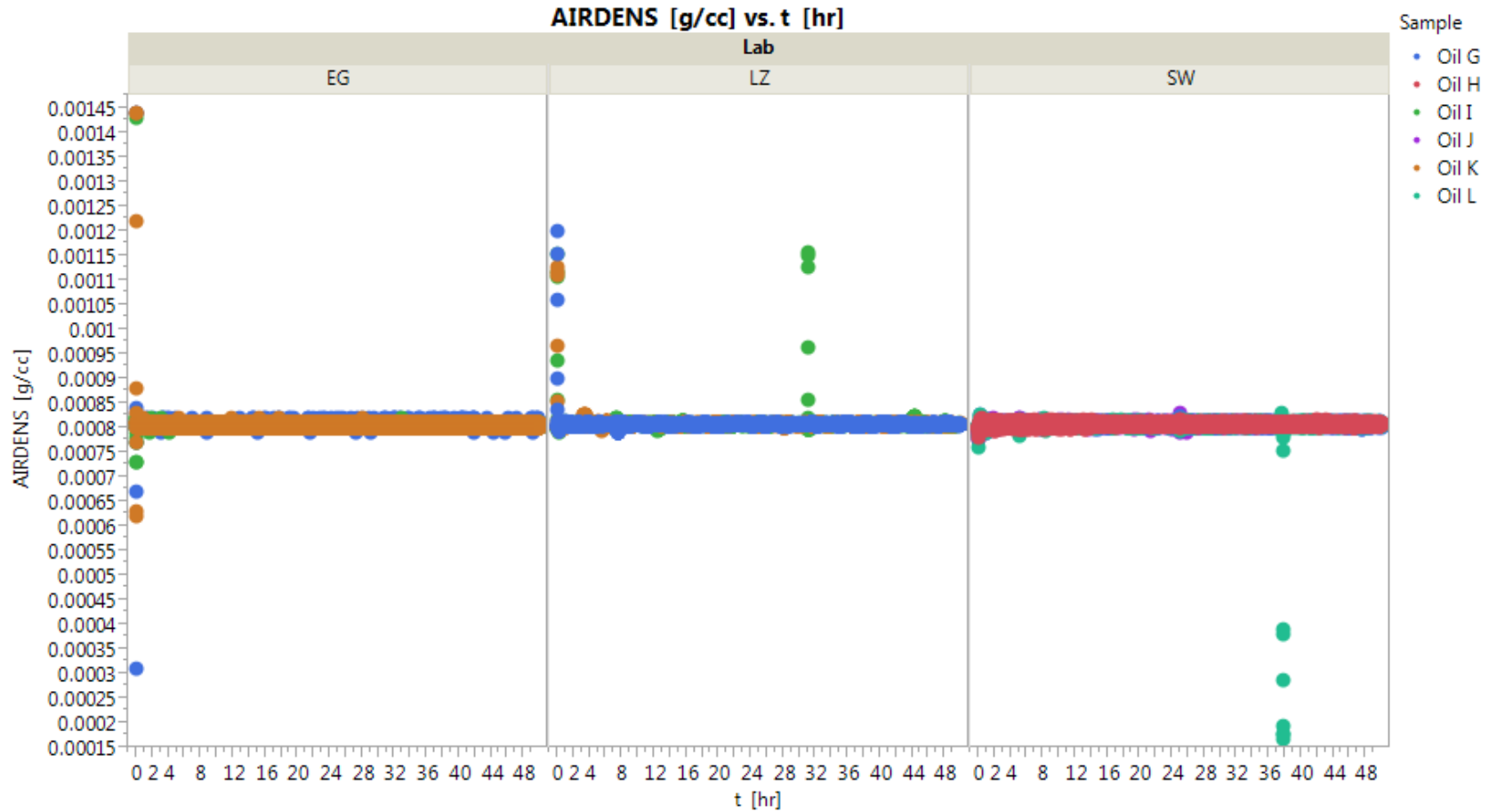
Oil Flow



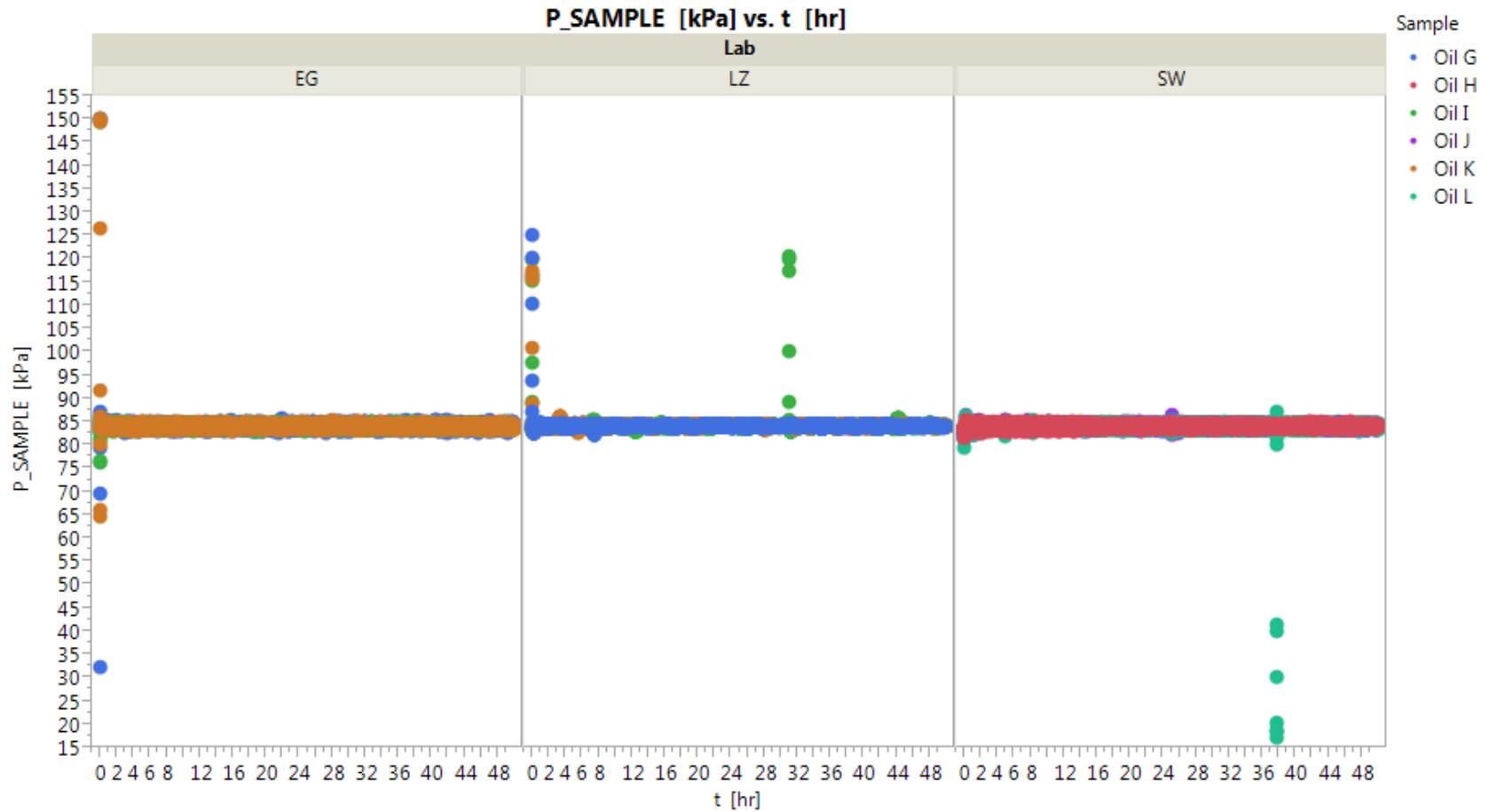
Oil Flow



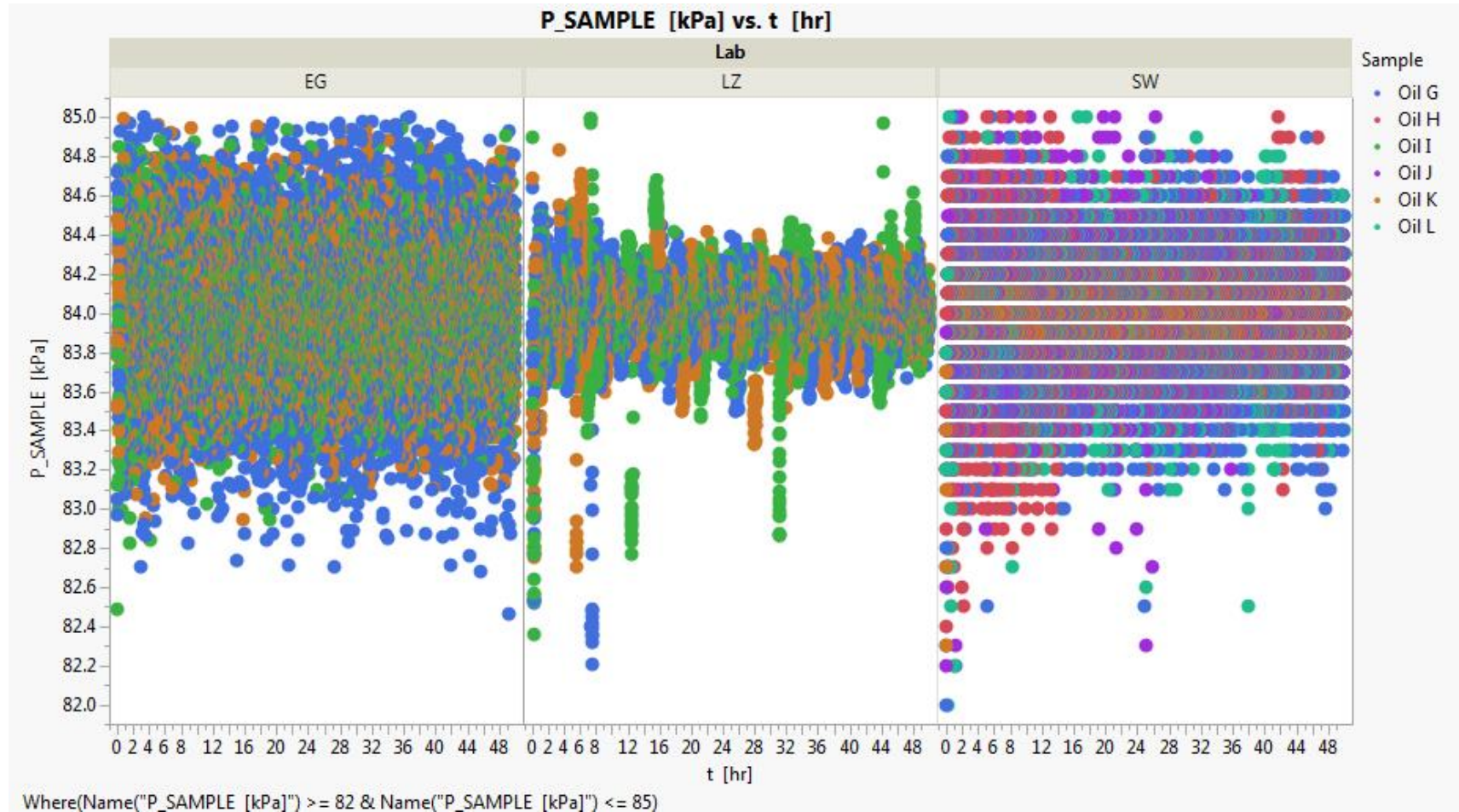
Air density



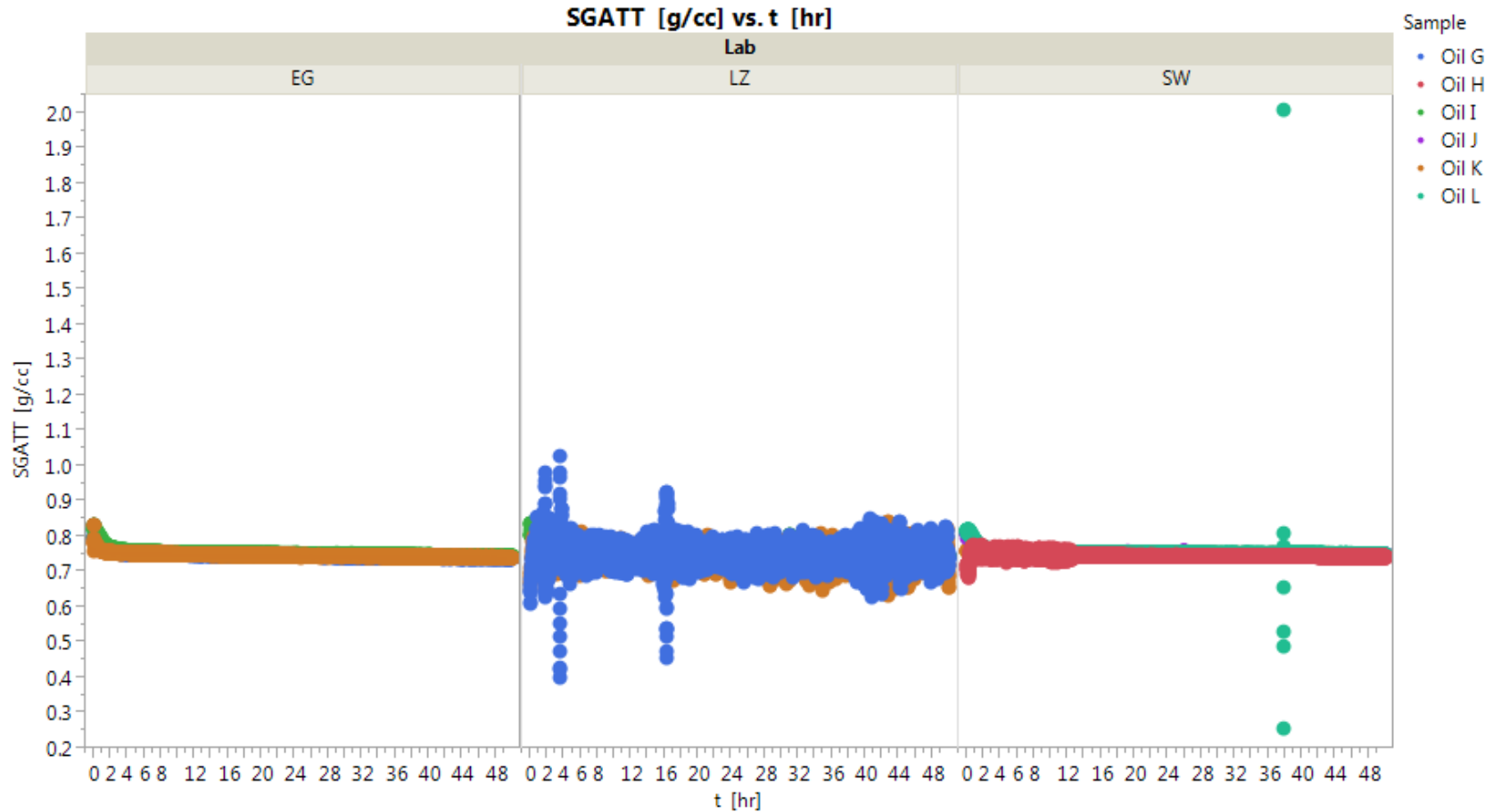
Oil Sample Pressure



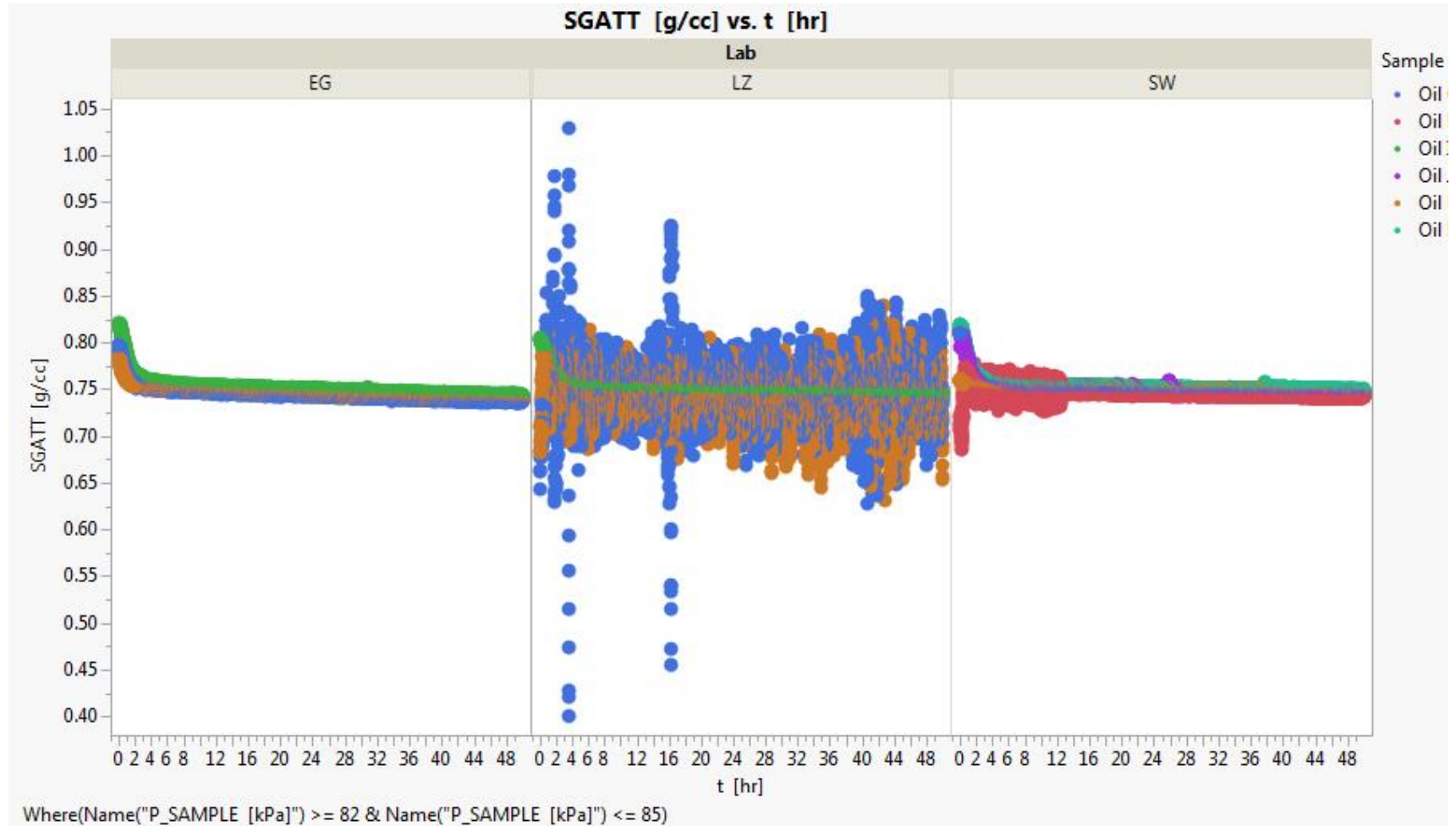
Oil sample pressure



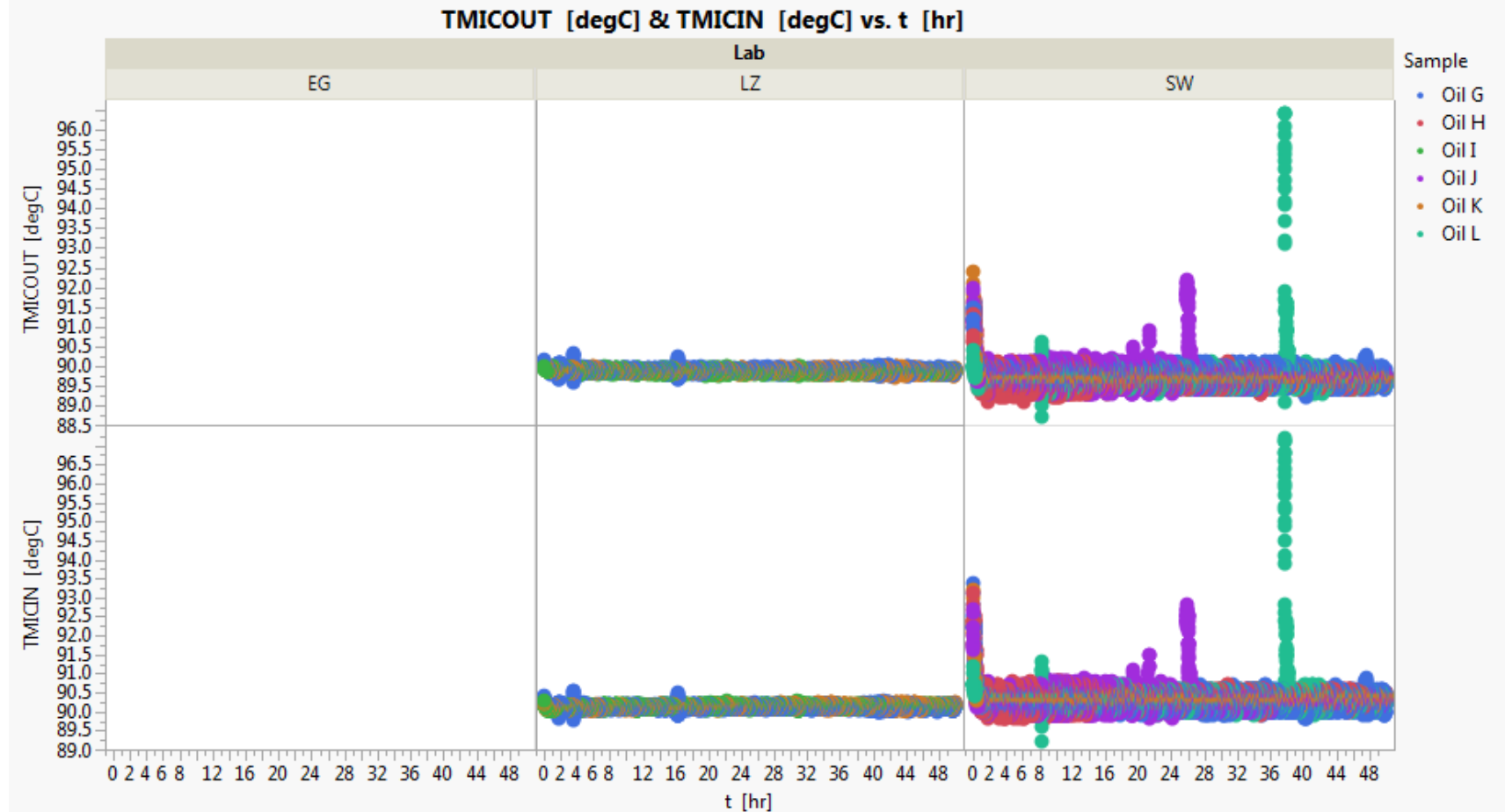
Temperature-corrected oil sample density



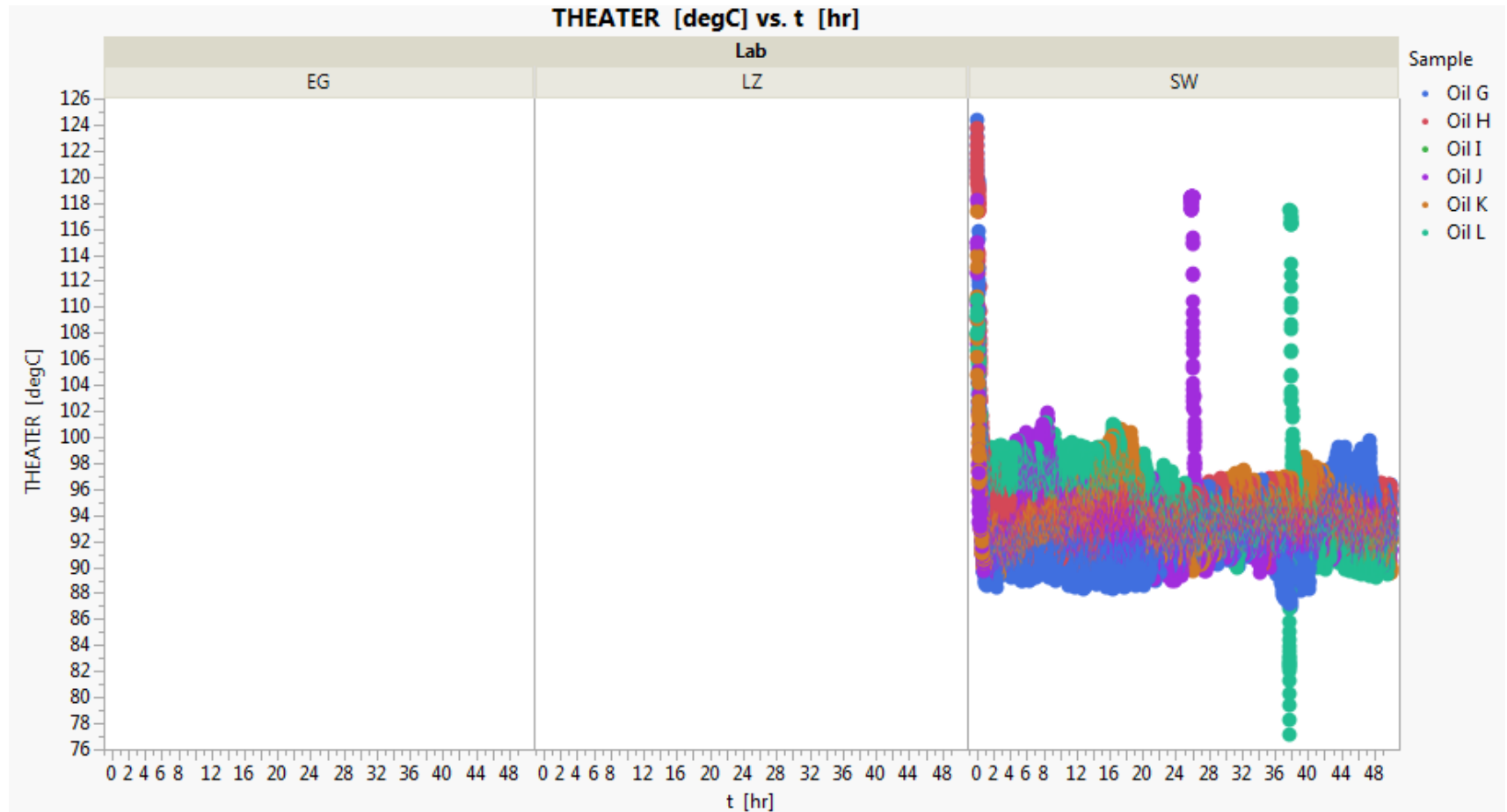
Temperature-corrected oil sample density



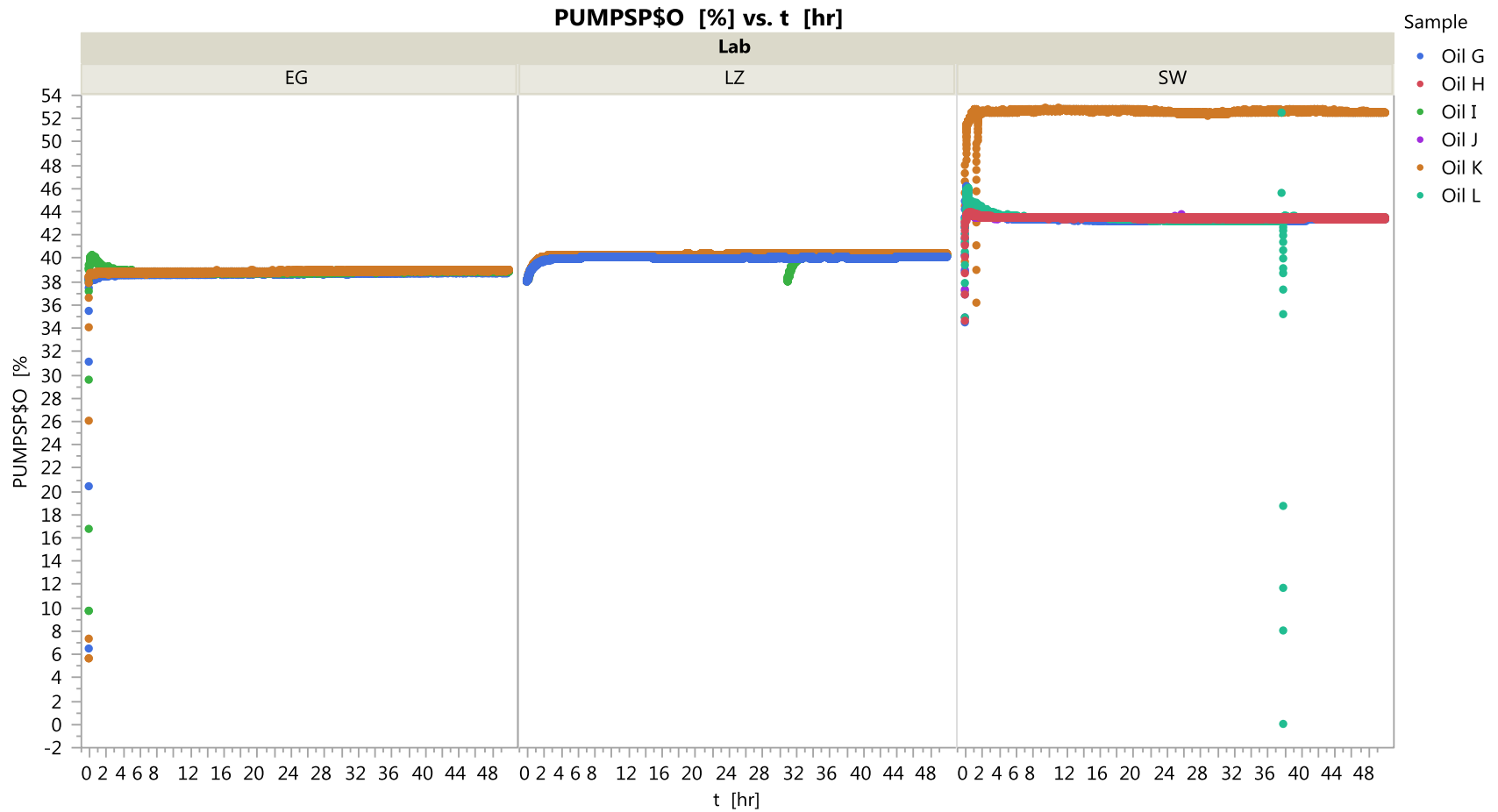
Micromotion inlet and outlet temperature



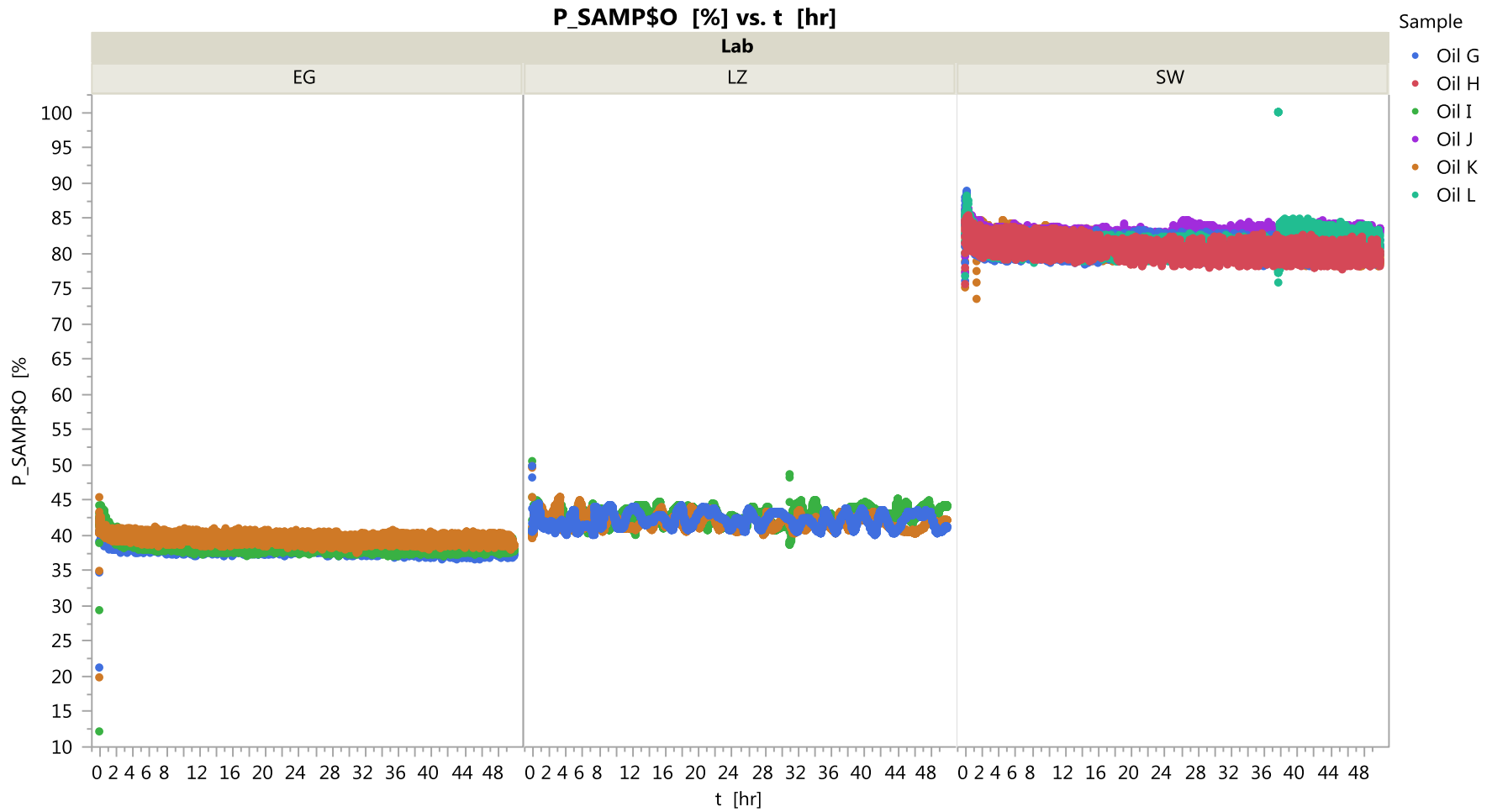
Heater Temperature



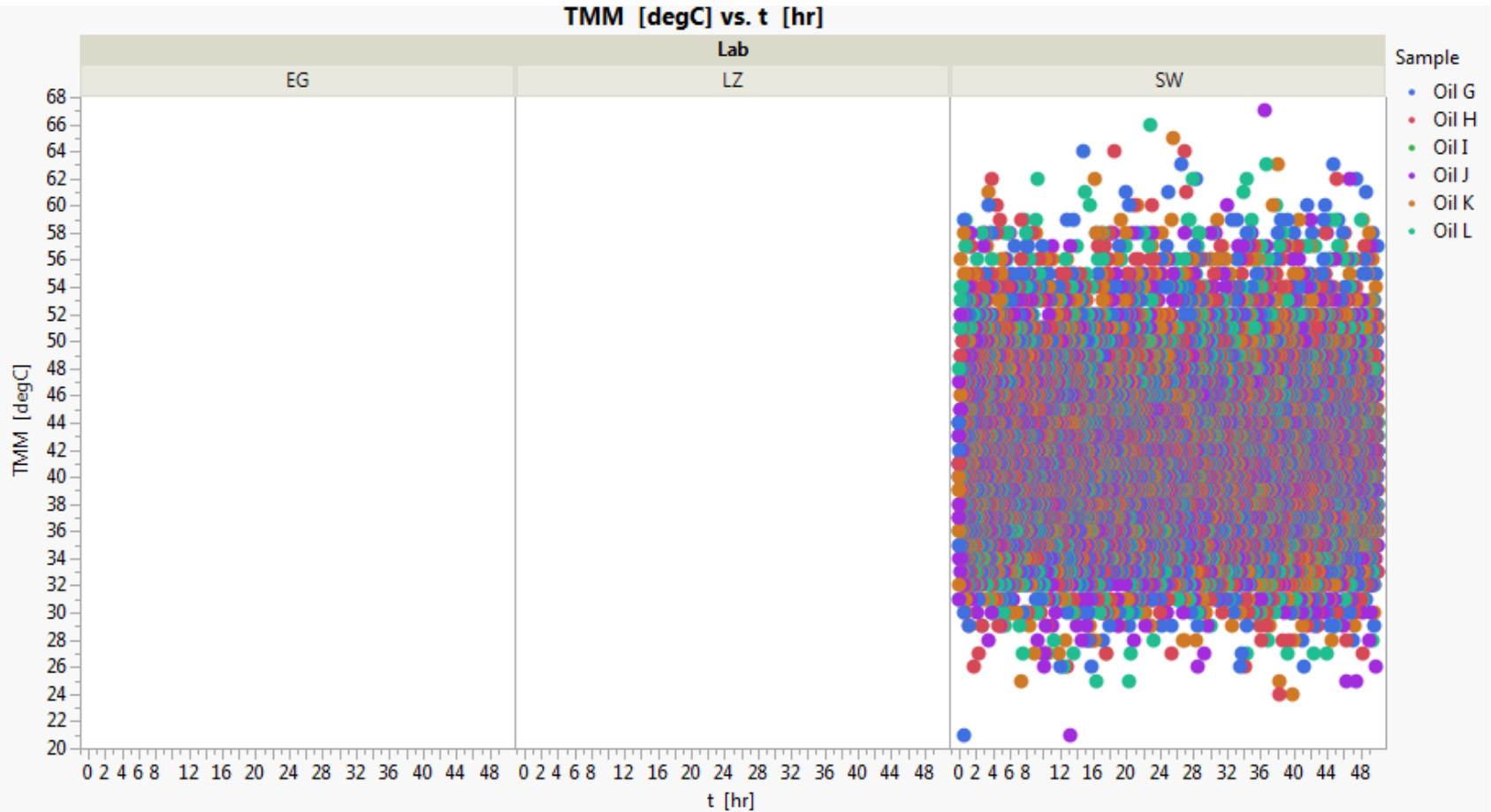
Pump Speed Signal Output



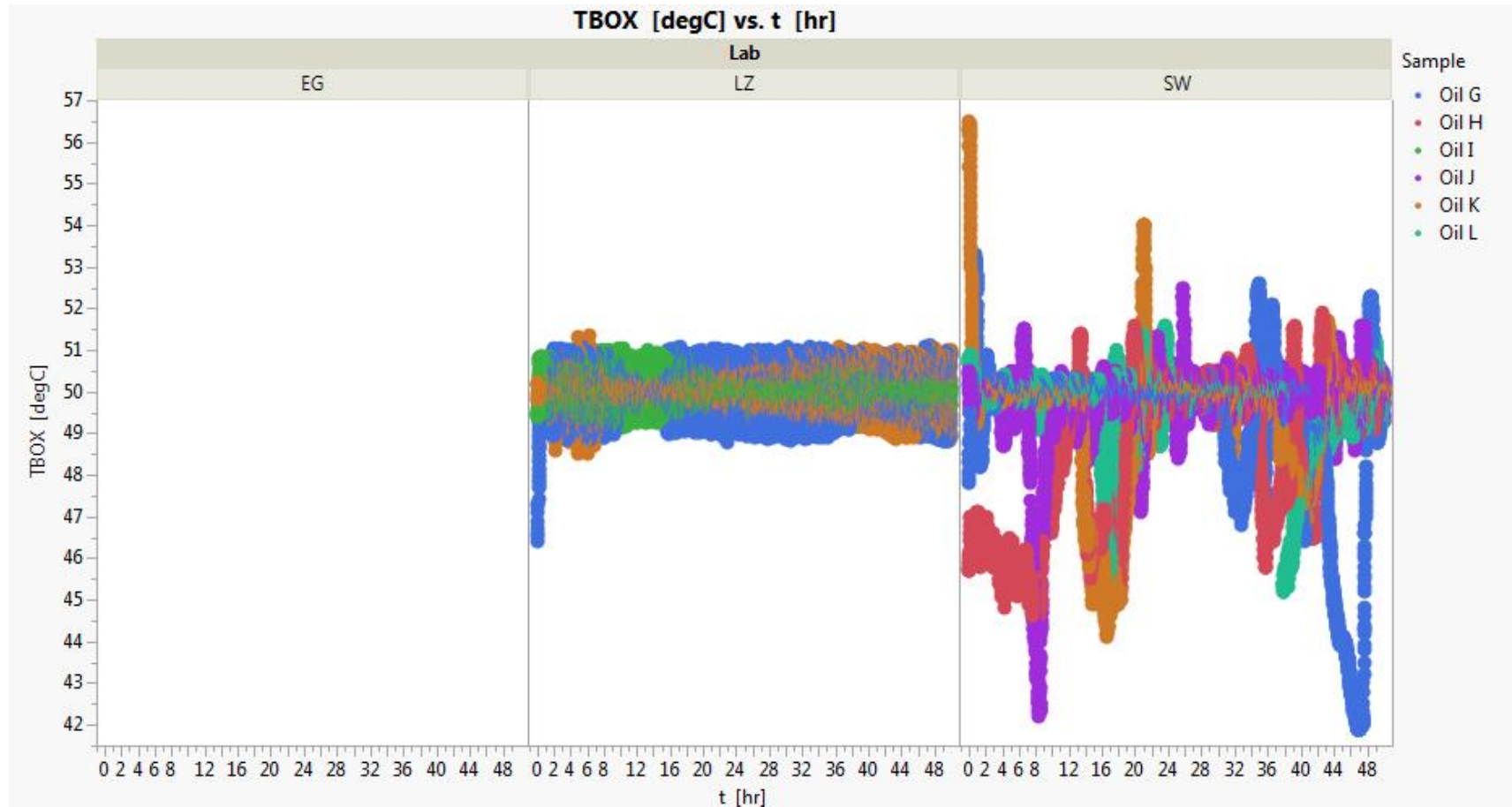
Pressure Regulator Signal Output



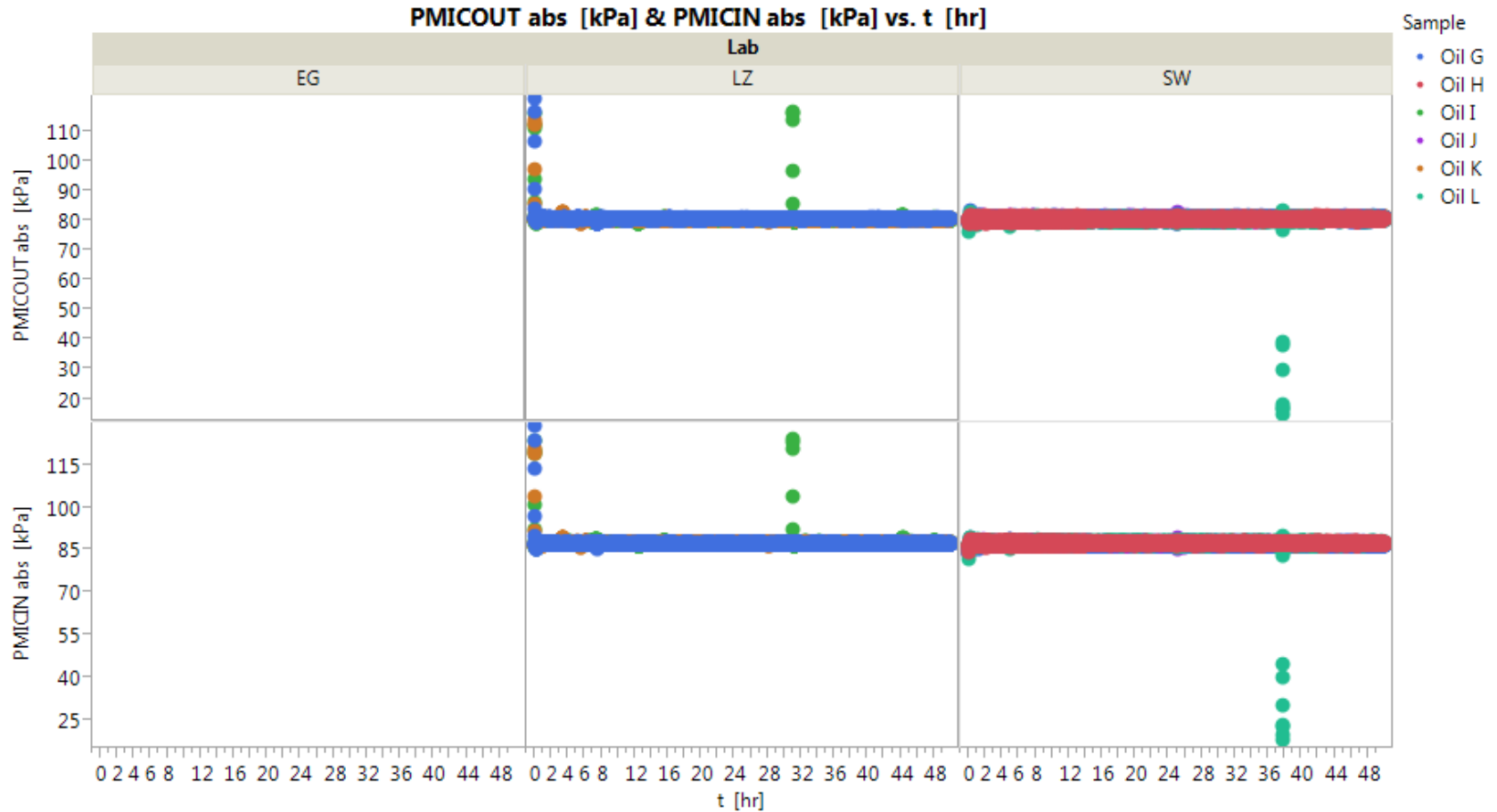
Micromotion Temperature



Box Temperature

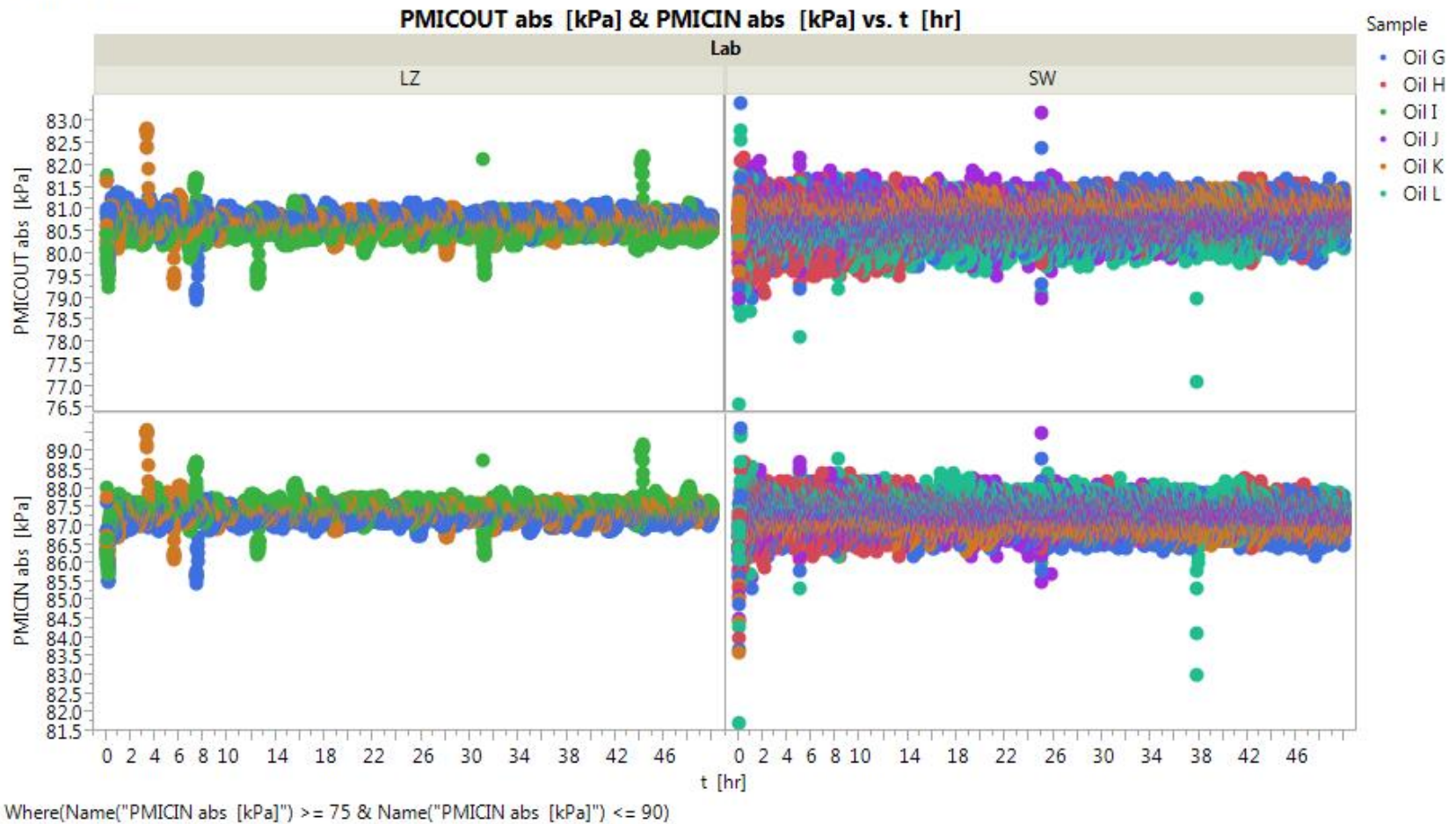


Micromotion inlet and outlet pressure



Micromotion inlet and outlet pressure

Graph Builder



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