



Engine Serial #: ZAP

Generator Set Specifications

Engine

Engine Sales Model:		Package Serial No.		Test Date:	Mar-2008	1:19
Engine Size:	3516	Serial Number:	G5J	Run No.:	1	
Fuel Type:	DI	Genset Arr:		Data ID:		
Engine Arr.:	2560758	Genset Model:	AA477	Test Type:	OPERATIONS	
Rated Speed:	1800 RPM	Frame Size:		Pass/Fail:	PASSED	
Cooling System:	SCAC	Electrical Rating:	1695 KW	Test Cell:	518	
Aspiration Type:	TA	Rated Frequency:	60 Hz	Facility:		
		Rated Voltage:	4160 volts	P.L. Setting:		
		Rated P.F.:	0.80	Test Spec:		
		Tested:				

Load Steps

Test			Load Steps Transient Test				Load Reject Test						
No	Step	Load	Step Time (Min)	Step No	Initial	Final	Units	PF	Step No	Initial	Final	Units	PF
		1695 KW		1			KW	0.80					
				2			KW	0.80					
				3			KW	0.80					
				4			KW	0.80					
				5			KW	1.00					



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Test Tolerances

Static Steps

Line Voltage (+- %)
Avg Voltage (+- %)
Current (+- %)
Power Factor (+-)
Comment:

Full Load Point

Power (+ %)
Power (- %)
Speed (+- rpm)
Frequency (+- Hz)
Comment:

Transient Frequency

Overshoot (%)
Undershoot (%)
Recovery Band (+- %)
Recovery Time (sec)
Steady State Band (+- %)
Steady State Time (sec)
Comment:

Transient Voltage

Overshoot (%)
Undershoot (%)
Oshoot (100-0) (%)
Ushoot (100-0) (%)
Recovery Band (+- %)
Recovery Time (sec)
Steady State Band (+- %)
Steady State Time (sec)
Comment:

High Idle Stability and No-Load Point

Min Speed (rpm)
Max Speed (rpm)
Comment:



Test Report

Engine Serial #: ZAP

Generator Serial #:	G5J	Fuel Type:	DI	Test Date:	Mar-2008 1:19
Engine Arr.:	2560758	Cooling System:	S C A C	Pass/Fail:	PASSED
		Test Cell:	518		
		Test Run No.:	1	ECM Codes:	No
		Tested:	W/O Fan		

No Load	Amount from Nominal	Measured	Specification
High Idle Speed	-1 RPM	1799 RPM	1800 RPM
Phase A volts	0.0 %	4158 V	4160 V
Phase B volts	0.2 %	4168 V	4160 V
Phase C volts	-0.2 %	4150 V	4160 V
Test Voltage	0.0 %	4159 V	4160 V

Full Load	Amount from Nominal	Measured	Specification
Rated Engine Speed	0 RPM	1800 RPM	1800 RPM
Power	-0.5 %	1687.4 kW	1695 kW
Corrected Power	0.4 %	1701.9 kW	1695 kW
Correction Factor	1.0086	1.0086	none
Frequency	0.0 %	60.0 Hz	60 Hz
Phase A volts	-0.1 %	4157 V	4160 V
Phase B volts	0.1 %	4162 V	4160 V
Phase C volts	-0.2 %	4153 V	4160 V
Test Voltage	-0.1 %	4158 V	4160 V
Phase A Current	-1.0 %	291 Amp	294 Amp
Phase B Current	0.0 %	294 Amp	294 Amp
Phase C Current	-0.7 %	292 Amp	294 Amp
Test Current	-0.4 %	293 Amp	none Amp
Power Factor	0.0 %	0.800	0.800

	Load	Voltage Response				Frequency Response				
	Nom	From	Volt ST State		Volt	Volt	Freq	ST State	Freq	Freq
	kW	%	Nom	Rcvry	Peak	Valley	Rcvry	Rcvry	Peak	Valley
			s	s	%	%	s	s	%	%
0	0	0.0	1.0	1.0	15.1	1.8	1.2	1.2	5.4	1.3
1	785	1.0	0.0	0.0	0.1	6.1	0.0	0.0	0.8	2.9
2	1325	0.4	0.0	0.0	0.0	4.3	0.0	0.0	0.8	2.1
3	1695	0.2	0.0	0.0	0.0	3.2	0.0	0.0	0.0	1.7
5	0	0.0	0.0	0.0	15.8	1.9	1.0	1.0	5.4	1.3



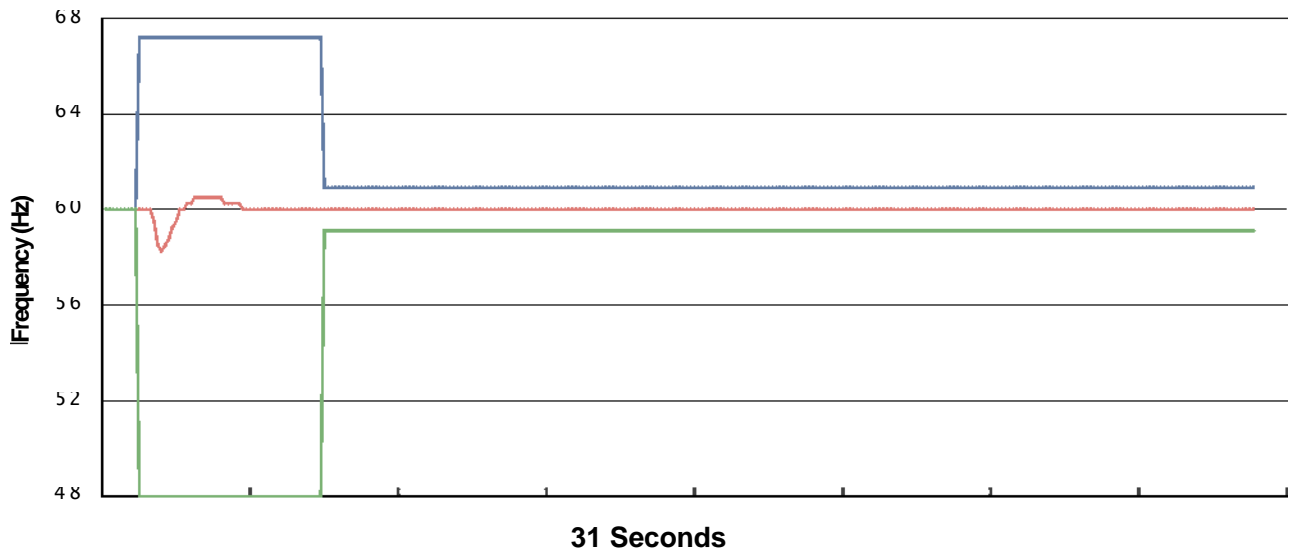
Transient Report

Engine Serial #: ZAP

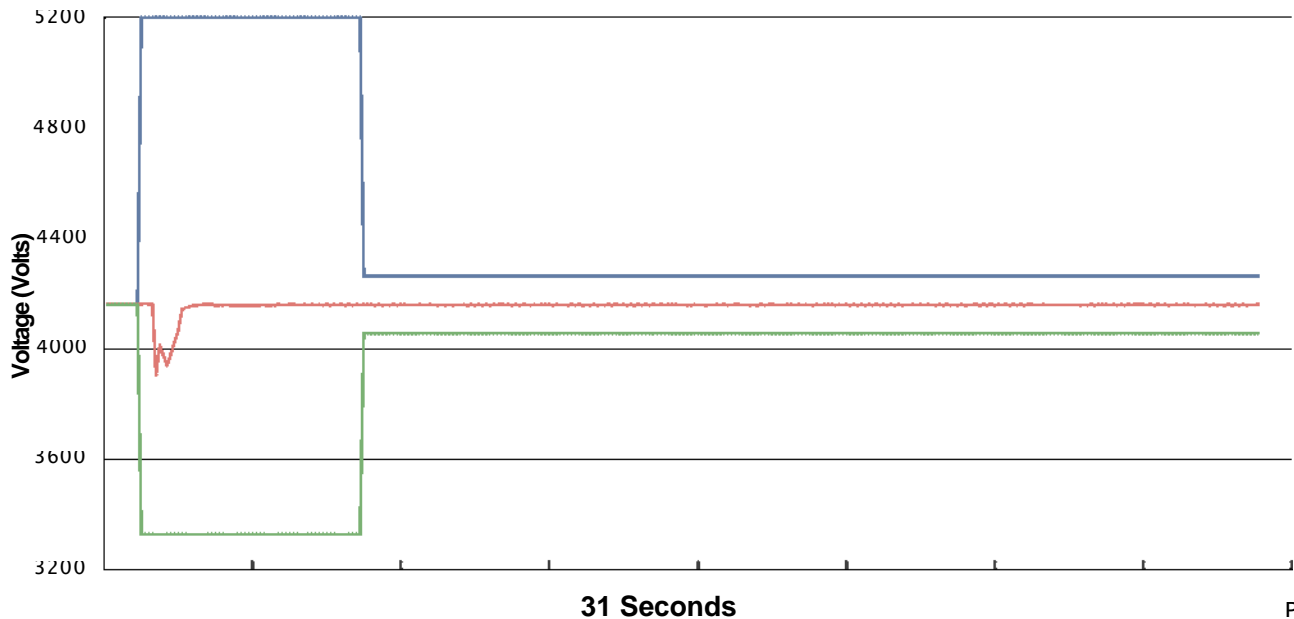
Generator Serial #:	G5J	Fuel Type:	DI	Sample Time:	Mar-2008 2:01
Engine Serial #:	ZAP	Cooling System:	SCAC	Load Setting:	785.0 KW
Engine Arr.:	2560758	Test Cell:	518	Test State:	Trnsnt Step # 1
		Test Run No.:	1	Step	PASSED

Frequency Recovery:	0.0	Sec	Voltage Recovery:	0.0	Sec
Frequency Minimum:	58.25	Hz	Voltage Minimum:	3905.00	Volts
Frequency Maximum:	60.50	Hz	Voltage Maximum:	4163.00	Volts
Initial Load Percentage:	0.00	%	Transitional Load Pct.:	46.31	%

Frequency Response



Voltage Response





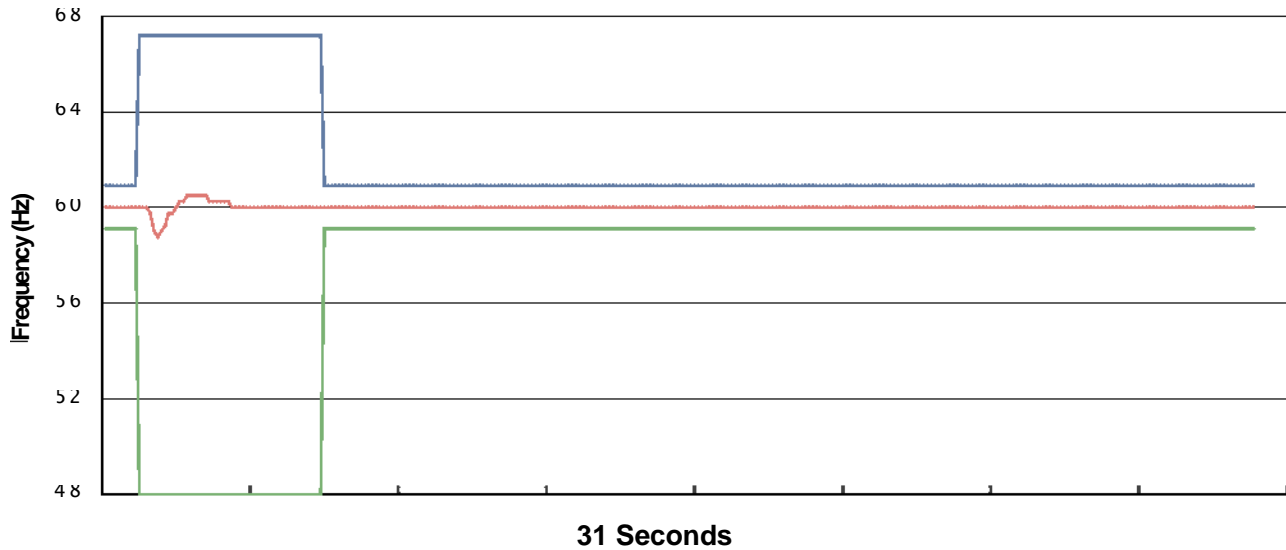
Transient Report

Engine Serial #: ZAP

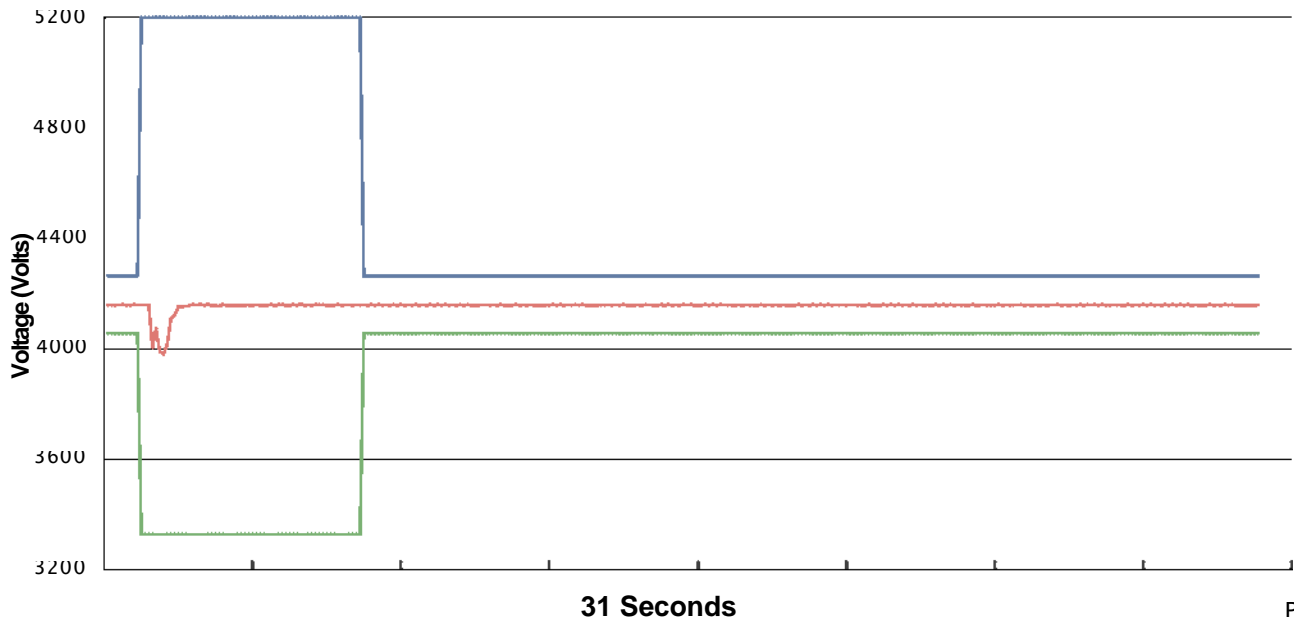
Generator Serial #:	G5J	Fuel Type:	DI	Sample Time:	Mar-2008 2:02
Engine Serial #:	ZAP	Cooling System:	SCAC	Load Setting:	1325.0 KW
Engine Arr.:	2560758	Test Cell:	518	Test State:	Trnsnt Step # 2
		Test Run No.:	1	Step	PASSED

Frequency Recovery:	0.0	Sec	Voltage Recovery:	0.0	Sec
Frequency Minimum:	58.75	Hz	Voltage Minimum:	3981.00	Volts
Frequency Maximum:	60.50	Hz	Voltage Maximum:	4162.00	Volts
Initial Load Percentage:	46.31	%	Transitional Load Pct.:	78.17	%

Frequency Response



Voltage Response





Transient Report

Engine Serial

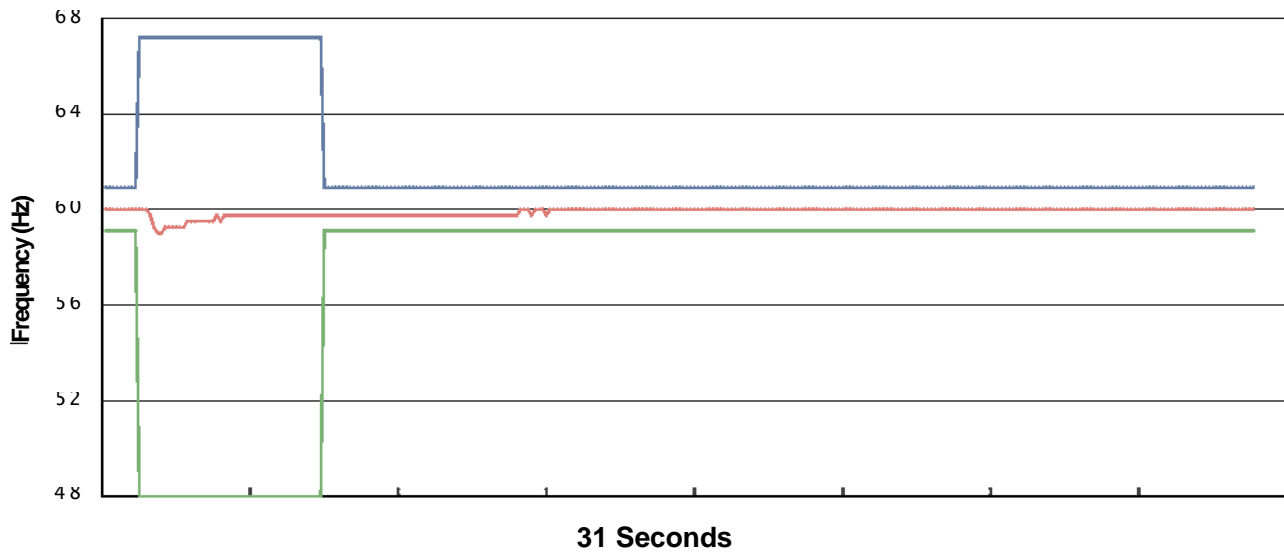
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ZAP

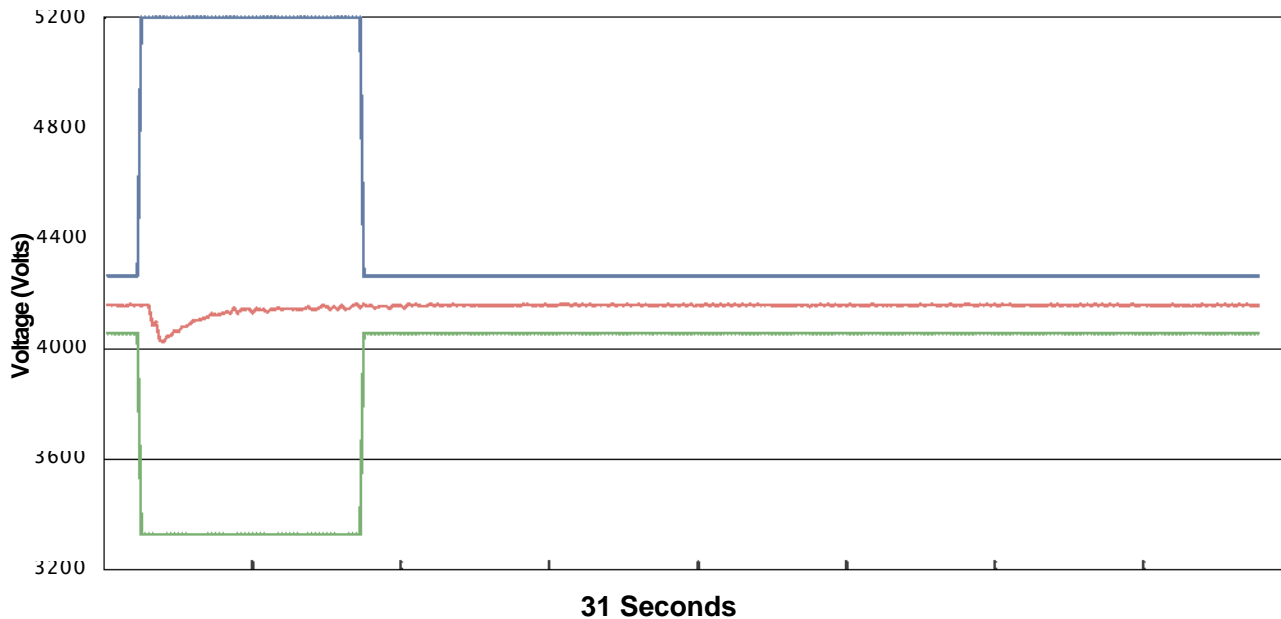
Generator Serial #:	G5J	Fuel Type:	DI	Sample Time:	Mar-2008 2:02
Engine Serial #:	ZAP	Cooling System:	SCAC	Load Setting:	1695.0 KW
Engine Arr.:	2560758	Test Cell:	518	Test State:	Trnsnt Step # 3
		Test Run No.:	1	Step	PASSED

Frequency Recovery:	0.0	Sec	Voltage Recovery:	0.0	Sec
Frequency Minimum:	59.00	Hz	Voltage Minimum:	4025.00	Volts
Frequency Maximum:	60.00	Hz	Voltage Maximum:	4162.00	Volts
Initial Load Percentage:	78.17	%	Transitional Load Pct.:	100.00	%

Frequency Response



Voltage Response



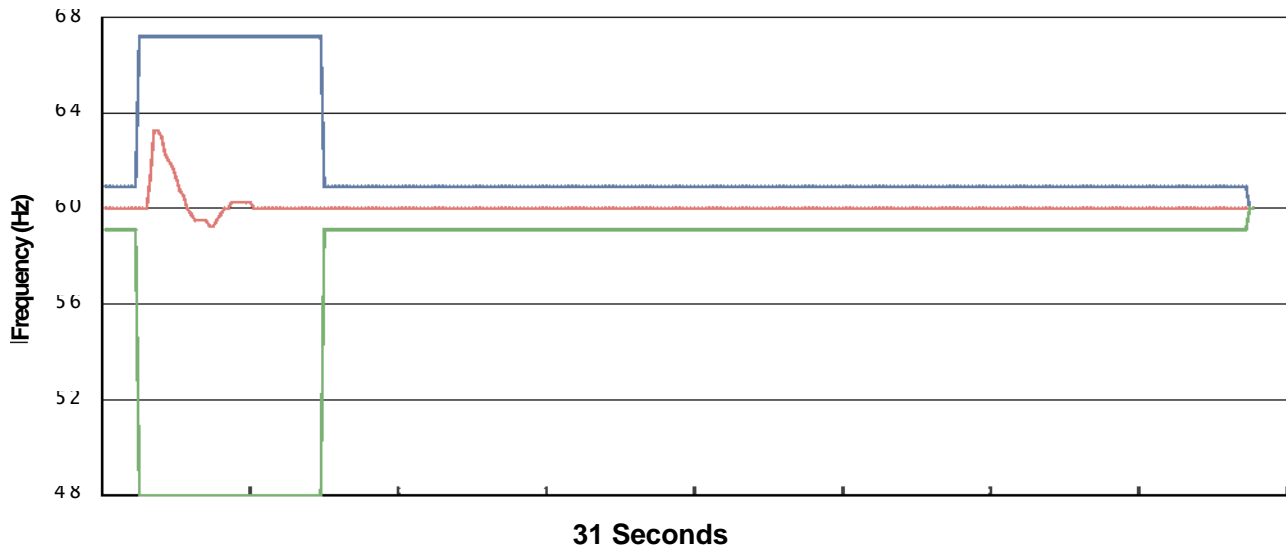


Transient Report

Engine Serial #: ZAP

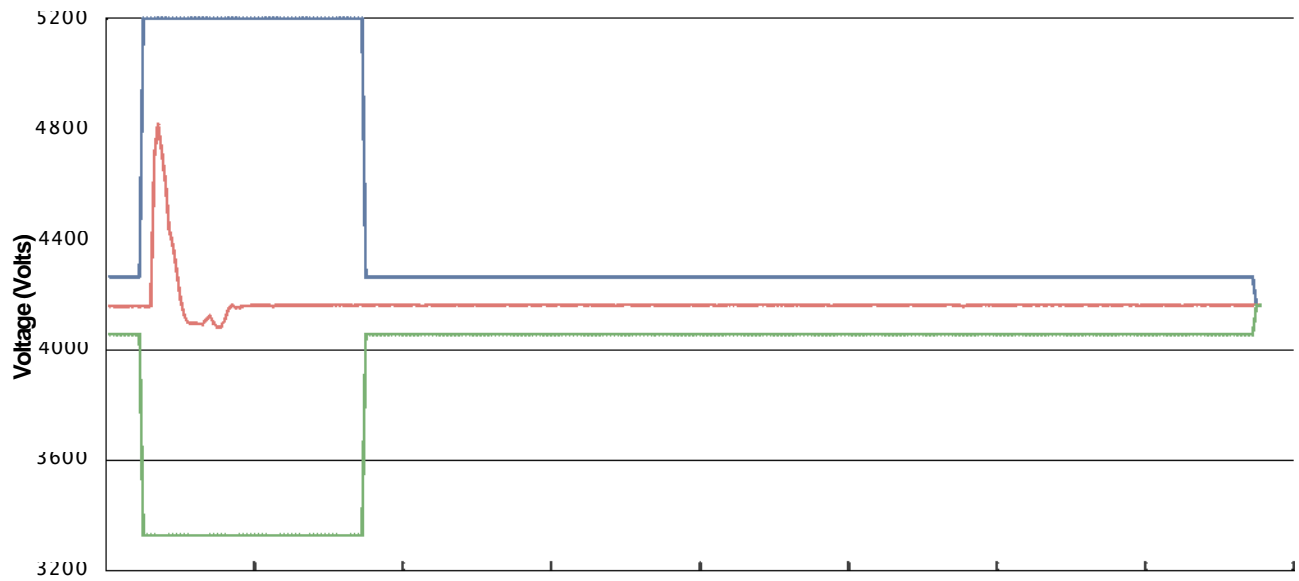
Generator Serial #:	G5J	Fuel Type:	DI	Sample Time:	Mar-2008 2:03
Engine Serial #:	ZAP	Cooling System:	SCAC	Load Setting:	0.0 KW
Engine Arr.:	2560758	Test Cell:	518	Test State:	Trnsnt Step # 5
		Test Run No.:	1	Step	PASSED

Frequency Recovery:	1.0 Sec	Voltage Recovery:	0.0 Sec
Frequency Minimum:	59.25 Hz	Voltage Minimum:	4081.00 volts
Frequency Maximum:	63.25 Hz	Voltage Maximum:	4816.00 volts
Initial Load Percentage:	100.00 %	Transitional Load Pct.:	0.00 %



Frequency Response

Voltage Response





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