CATERPILLAR

ESO Number: MJPYY00
Engine Serial #: DD300394

Generator Set Specifications

Engine

Engine Sales Model:	3516DITASCAC
Engine Size:	3516
Fuel Type:	DI
Engine Arr.:	3994241
Dyno Test Spec:	3704965
Rated Speed:	1500 RPM
Cooling System:	SCAC
Aspiration Type:	TA

Generator

Package Serial No.	YBT00307	
Serial Number:	G2B00147	
Genset Arr:	2523882	
Genset Model:	AA355	
Frame Size:	1669	
Electrical Rating:	1600	KW
Rated Frequency:	50	Hz
Rated Voltage:	400	Volts
Rated P.F.:	0.80	
Tested:	With Fan	

System

Test Date.	21-Apr-2014 7:34
Run No.:	1
Data ID:	
Test Type:	OPERATIONS
Pass/Fail:	PASSED
Test Cell:	4
Facility:	GRIFFIN
P.L. Setting:	GG0608
Test Spec:	3L0438-02

Load Steps

Static Test					Transient Test					Load Reject Test				
Step No	Load	Units	PF	Step Time (Min)	Step No	Initial	Final	Units	PF	Step No	Initial	Final	Units	PF
1	1600	KW	0.80	1.00	1	0	650	KW	0.80					
					2	650	1100	KW	0.80					
					3	1100	1465	KW	0.80					
					4	1465	1600	KW	0.80					
					5	1600	0	KW	1.00					

Test Tolerances

Static Steps			
	Line Voltage	(+- %)	4.0
	Avg Voltage	(+- %)	1.0
	Current	(+- %)	3.0
	Power Factor	(+-)	0.01
	Comment:		
Full Load Point			
	Power	(+ %)	3.0
	Power	(- %)	3.0
	Speed	(+- rpm)	10
	Frequency	(+- Hz)	0.300
	Comment:		
Transient Frequency			
	Overshoot	(%)	12.0
	Undershoot	(%)	20.0
	Recovery Band	(+- %)	1.50
	Recovery Time	(sec)	5.0
	Steady State Band	(+- %)	1.50
	Steady State Time	(sec)	25.0
	Comment:		
Transient Voltage			
	Overshoot	(%)	25.0
	Undershoot	(%)	20.0
	Oshoot (100-0)	(%)	35.0
	Ushoot (100-0)	(%)	35.0
	Recovery Band	(+- %)	2.50
	Recovery Time	(sec)	6.0
	Steady State Band	(+- %)	2.50
	Steady State Time	(sec)	26.0
	Comment:		
High Idle Stability and No-Load Poin			
	Min Speed	(rpm)	1,490
	Max Speed	(rpm)	1,510
	Comment:		

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Test Report

Generator Serial #:	G2B00147	Fuel Type:	DI	Test Date:	21-Apr-2014 7:34
Engine Serial #:	DD300394	Cooling System:	SCAC		
Dyno Test Spec:	3704965	Test Cell:	4	Pass/Fail:	PASSED
Engine Arr.:	3994241	Test Run No.:	1	ECM Codes:	No
		Tested:	W/ Fan		

No Load	Amount from Nominal		Measured		Specification	
High Idle Speed	0	RPM	1500	RPM	1500	RPM
Phase A Volts	1.0	%	404	V	400	V
Phase B Volts	1.0	%	404	V	400	V
Phase C Volts	-0.3	%	399	V	400	V
Test Voltage	0.5	%	402	V	400	V

Full Load	Amount from Nominal		Measured		Specification	
Rated Engine Speed	0	RPM	1500	RPM	1500	RPM
Power	0.1	%	1602.2	kW	1600	kW
Corrected Power	0.6	%	1609.3	kW	1600	kW
Correction Factor	1.0044		1.0044		none	
Frequency	0.0	%	50.0	Hz	50	Hz
Phase A Volts	0.8	%	403	V	400	V
Phase B Volts	0.3	%	401	V	400	V
Phase C Volts	-0.9	%	396	V	400	V
Test Voltage	0.0	%	400	V	400	V
Phase A Current	-0.1	%	2870	Amp	2887	Amp
Phase B Current	0.5	%	2885	Amp	2887	Amp
Phase C Current	-0.4	%	2861	Amp	2887	Amp
Test Current	-0.5	%	2872	Amp	none	Amp
Power Factor	0.0	%	0.800		0.800	

	Load		Voltage Response				Frequency Response			
	Nom	From Nom	Volt Rcvry	ST State Rcvry	Volt Peak	Volt Valley	Freq Rcvry	ST State Rcvry	Freq Peak	Freq Valley
	kW	%	s	s	%	%	s	s	%	%
1	650	1.0	0.8	0.8	1.0	5.0	1.3	1.3	1.6	3.2
2	1100	1.6	0.8	0.8	0.8	4.3	0.7	0.7	1.2	3.0
3	1465	1.0	0.7	0.7	0.5	3.0	0.6	0.6	1.0	2.2
4	1600	0.9	0.0	0.0	0.3	1.8	0.0	0.0	0.2	1.2
5	0	0.0	0.8	0.8	19.0	0.8	1.3	1.3	8.0	1.4

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ESO Number: MJPYY00
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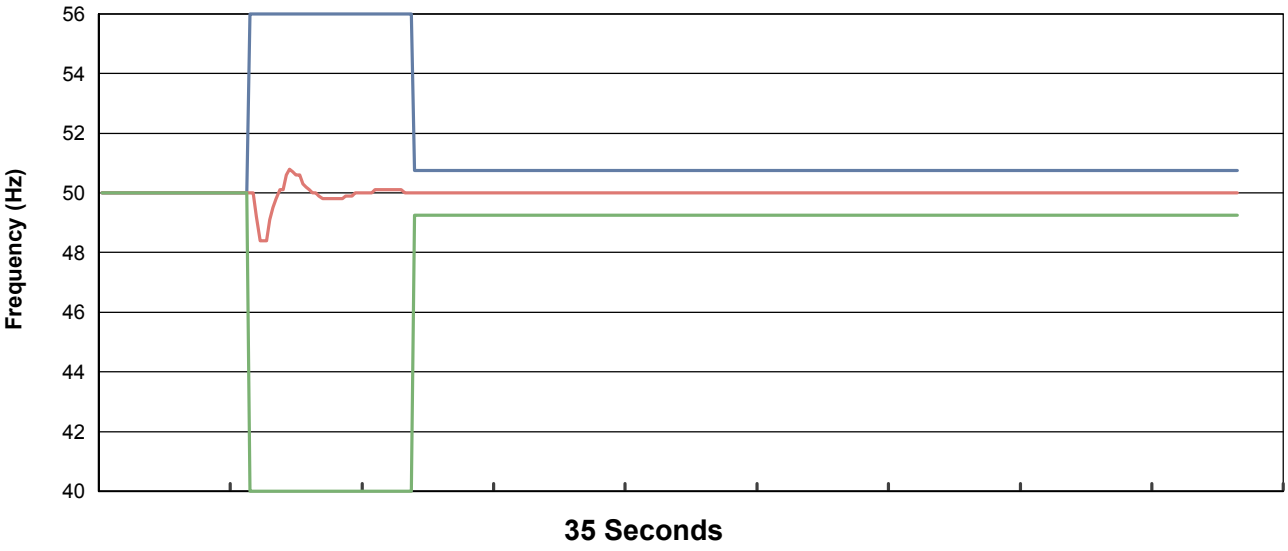
Transient Report

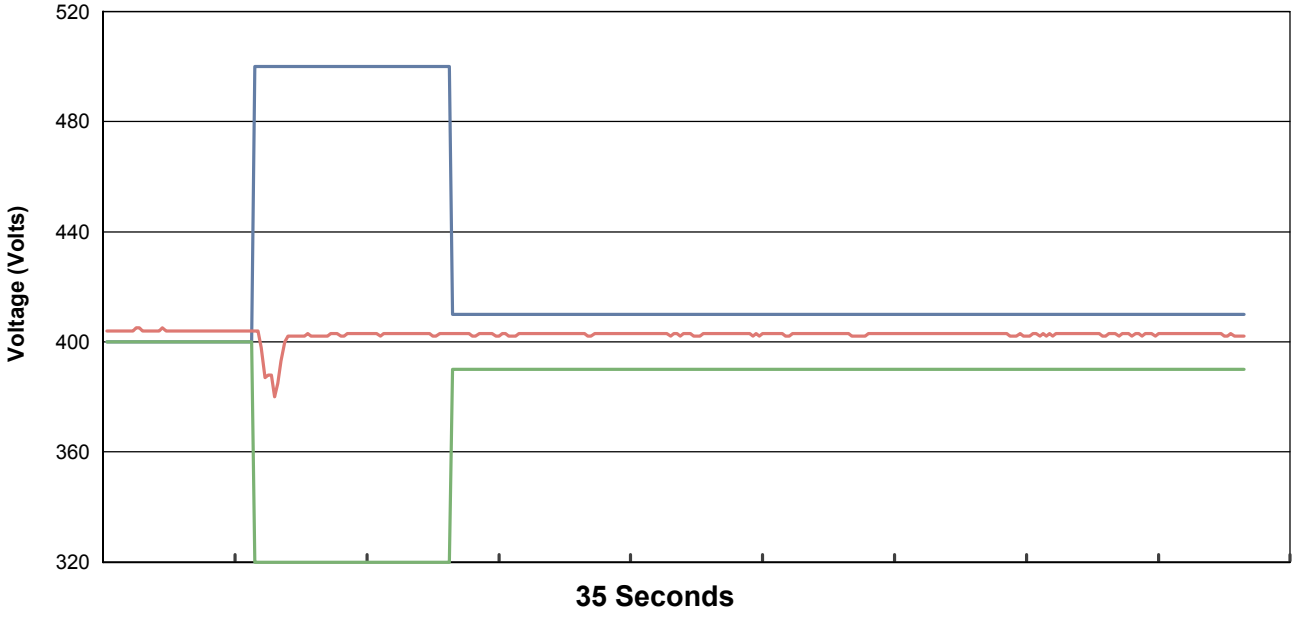
Generator Serial #:	G2B00147	Fuel Type:	DI	Sample Time:	21-Apr-2014 8:04
Engine Serial #:	DD300394	Cooling System:	SCAC	Load Setting:	650.0 KW
Dyno Test Spec:	3704965	Test Cell:	4	Test State:	Trnsnt Step # 1
Engine Arr.:	3994241	Test Run No.:	1	Step	PASSED
		Tested:	W/ Fan		

Frequency Recovery:	1.3	Sec	Voltage Recovery:	0.8	Sec
Frequency Minimum:	48.40	Hz	Voltage Minimum:	380.00	Volts
Frequency Maximum:	50.80	Hz	Voltage Maximum:	404.00	Volts
Initial Load Percentage:	0.00	%	Transitional Load Pct.:	40.63	%

Frequency Response



Voltage Response

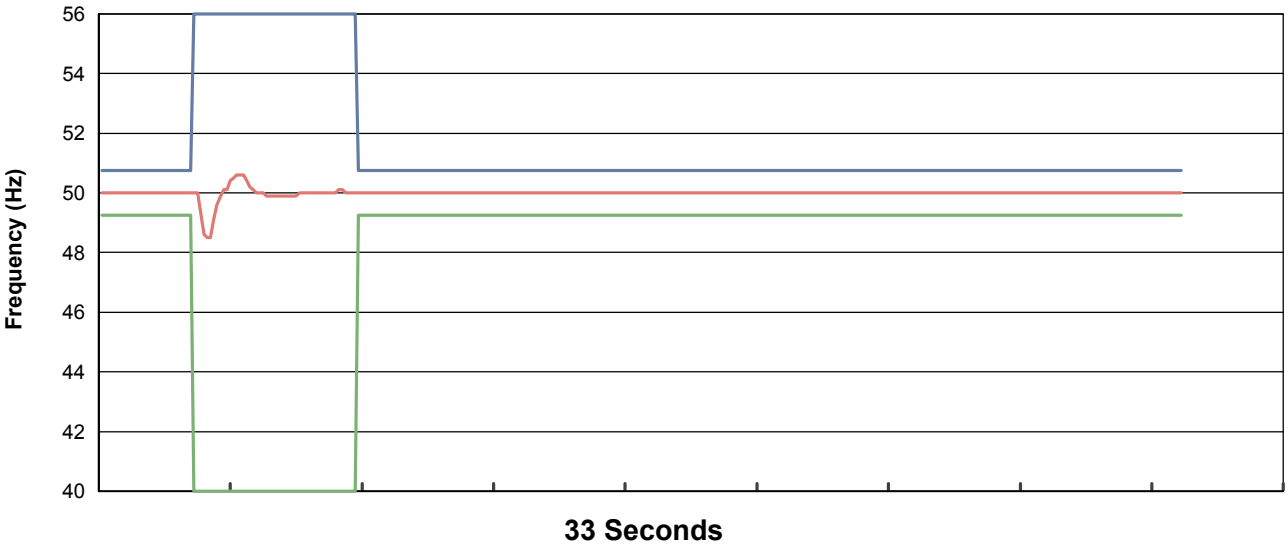


Transient Report

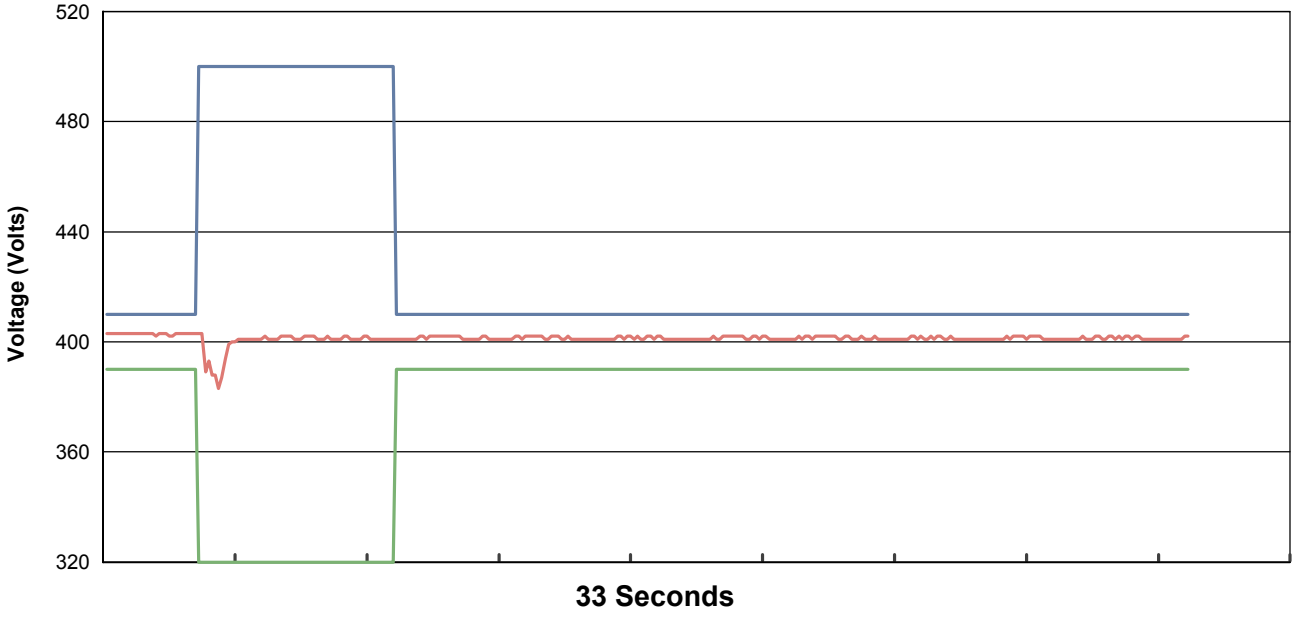
Generator Serial #:	G2B00147	Fuel Type:	DI	Sample Time:	21-Apr-2014 8:04
Engine Serial #:	DD300394	Cooling System:	SCAC	Load Setting:	1100.0 KW
Dyno Test Spec:	3704965	Test Cell:	4	Test State:	Trnsnt Step # 2
Engine Arr.:	3994241	Test Run No.:	1	Step	PASSED
		Tested:	W/ Fan		

Frequency Recovery:	0.7	Sec	Voltage Recovery:	0.8	Sec
Frequency Minimum:	48.50	Hz	Voltage Minimum:	383.00	Volts
Frequency Maximum:	50.60	Hz	Voltage Maximum:	403.00	Volts
Initial Load Percentage:	40.63	%	Transitional Load Pct.:	68.75	%

Frequency Response



Voltage Response



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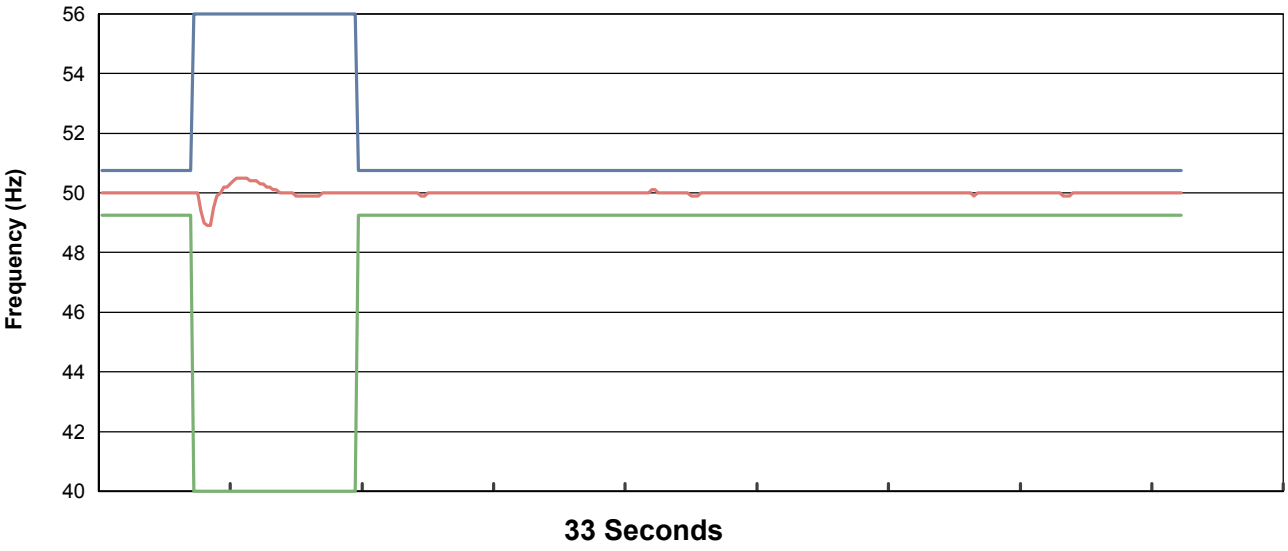
ESO Number: MJPYY00
Engine Serial #: DD300394

Transient Report

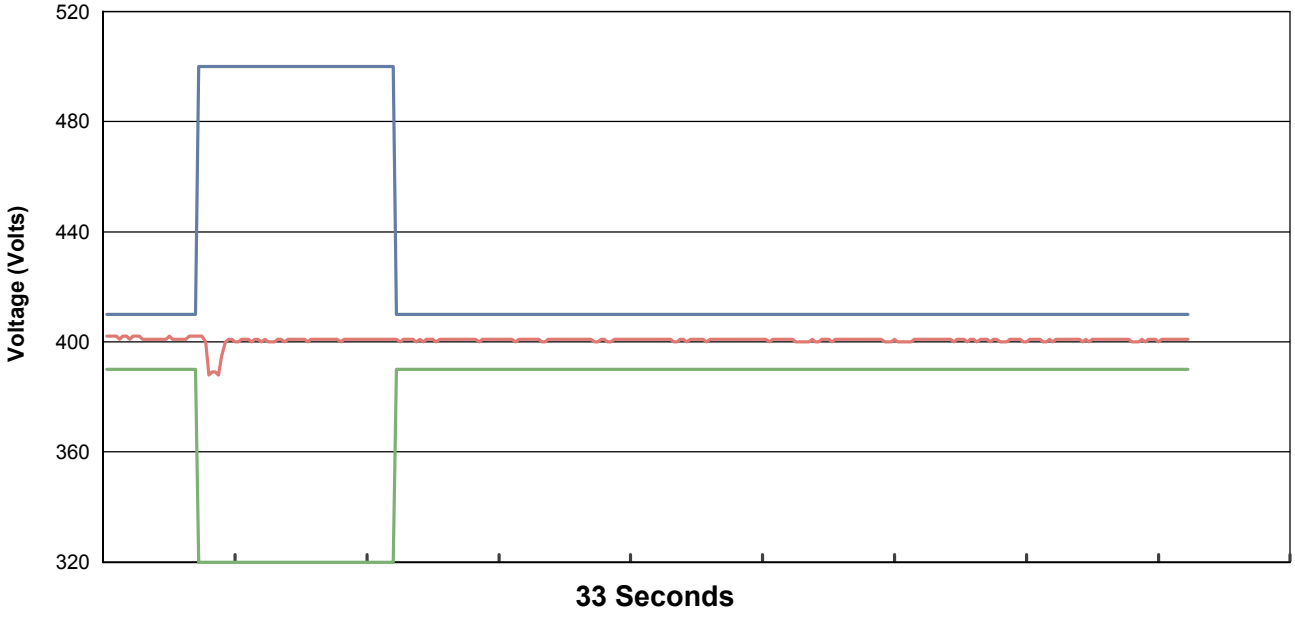
Generator Serial #:	G2B00147	Fuel Type:	DI	Sample Time:	21-Apr-2014 8:05
Engine Serial #:	DD300394	Cooling System:	SCAC	Load Setting:	1465.0 KW
Dyno Test Spec:	3704965	Test Cell:	4	Test State:	Trnsnt Step # 3
Engine Arr.:	3994241	Test Run No.:	1	Step	PASSED
		Tested:	W/ Fan		

Frequency Recovery:	0.6	Sec	Voltage Recovery:	0.7	Sec
Frequency Minimum:	48.90	Hz	Voltage Minimum:	388.00	Volts
Frequency Maximum:	50.50	Hz	Voltage Maximum:	402.00	Volts
Initial Load Percentage:	68.75	%	Transitional Load Pct.:	91.56	%

Frequency Response



Voltage Response



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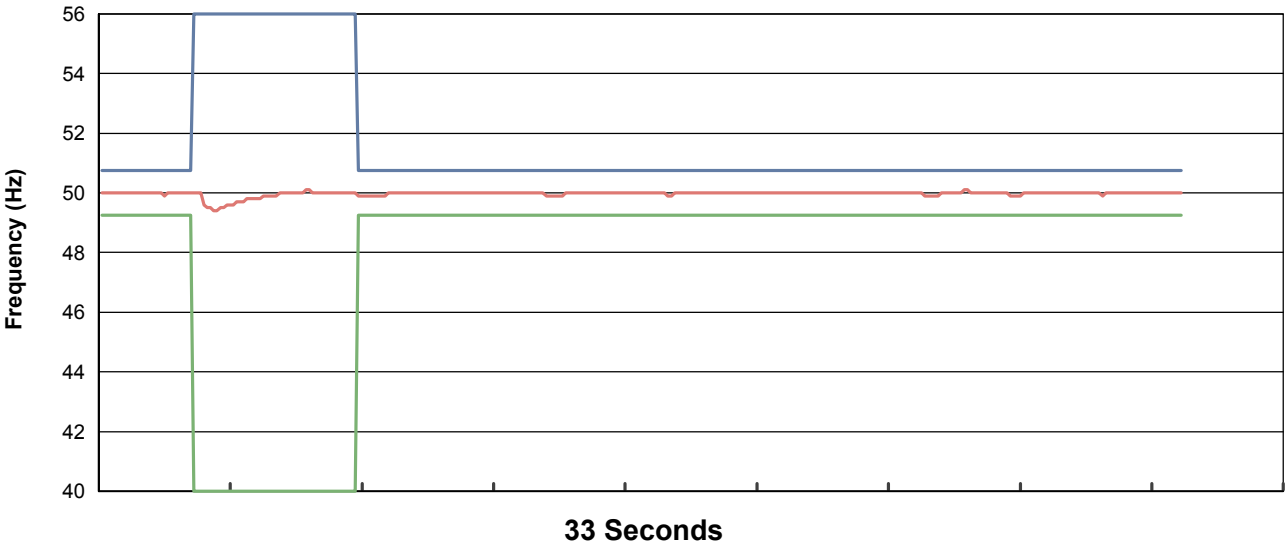
Transient Report

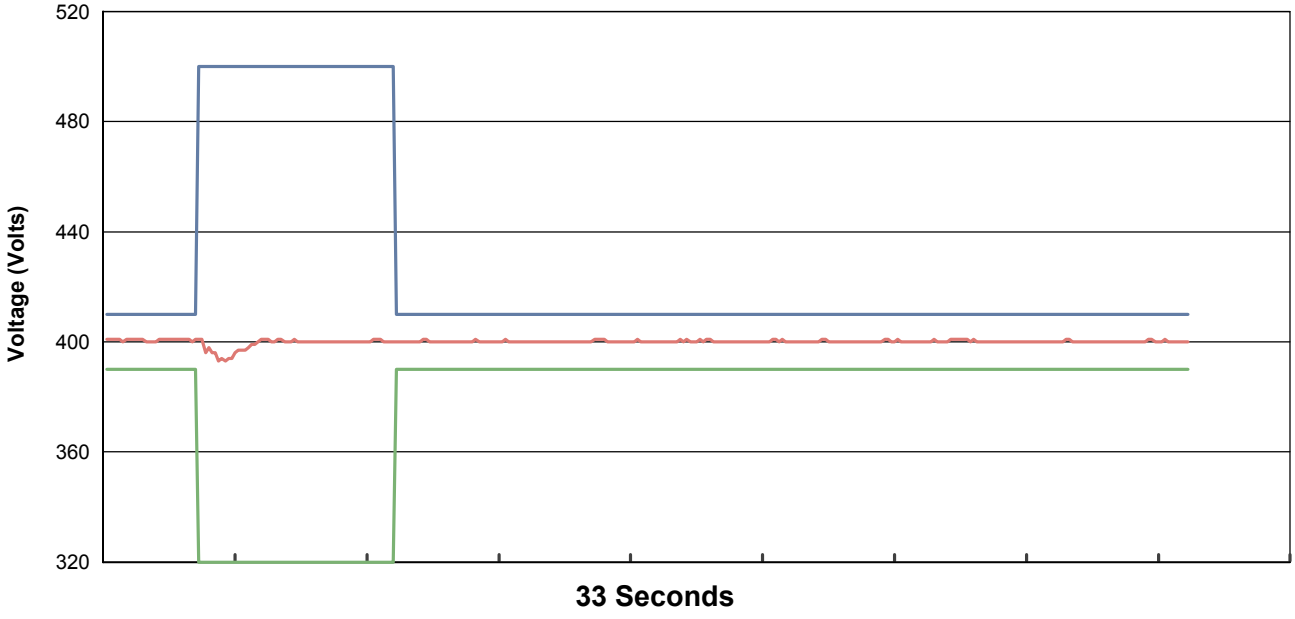
Generator Serial #:	G2B00147	Fuel Type:	DI	Sample Time:	21-Apr-2014 8:05
Engine Serial #:	DD300394	Cooling System:	SCAC	Load Setting:	1600.0 KW
Dyno Test Spec:	3704965	Test Cell:	4	Test State:	Trnsnt Step # 4
Engine Arr.:	3994241	Test Run No.:	1	Step	PASSED
		Tested:	W/ Fan		

Frequency Recovery:	0.0	Sec	Voltage Recovery:	0.0	Sec
Frequency Minimum:	49.40	Hz	Voltage Minimum:	393.00	Volts
Frequency Maximum:	50.10	Hz	Voltage Maximum:	401.00	Volts
Initial Load Percentage:	91.56	%	Transitional Load Pct.:	100.00	%

Frequency Response



Voltage Response



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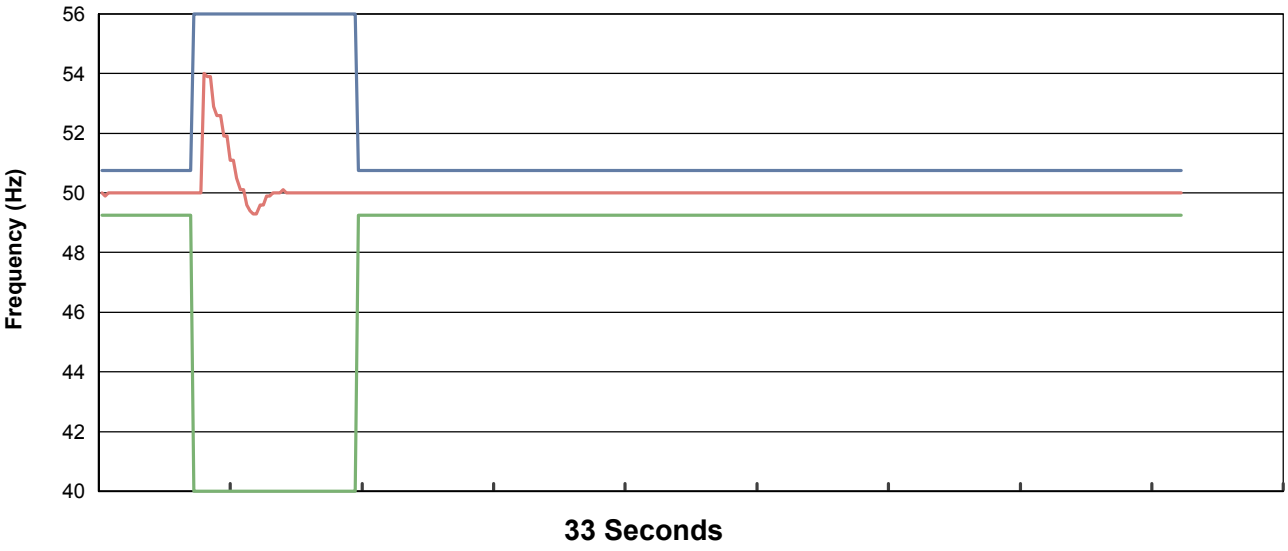
ESO Number: MJPYY00
Engine Serial #: DD300394

Transient Report

Generator Serial #:	G2B00147	Fuel Type:	DI	Sample Time:	21-Apr-2014 8:06
Engine Serial #:	DD300394	Cooling System:	SCAC	Load Setting:	0.0 KW
Dyno Test Spec:	3704965	Test Cell:	4	Test State:	Trnsnt Step # 5
Engine Arr.:	3994241	Test Run No.:	1	Step	PASSED
		Tested:	W/ Fan		

Frequency Recovery:	1.3	Sec	Voltage Recovery:	0.8	Sec
Frequency Minimum:	49.30	Hz	Voltage Minimum:	397.00	Volts
Frequency Maximum:	54.00	Hz	Voltage Maximum:	476.00	Volts
Initial Load Percentage:	100.00	%	Transitional Load Pct.:	0.00	%

Frequency Response



Voltage Response