APPLICATION FOR OSHPD SPECIAL SEISMIC CERTIFICATION PREAPPROVAL (OSP)

OFFICE USE ONLY	
APPLICATION #:	OSP – 0268-10

OSHPD Special Seismic Certification Preapproval (OSP)

Type: ☐ New ☒ Renewal

Manufacturer Information

Manufacturer: Cummins Power Generation

Manufacturer's Technical Representative: Bart Bashynski

Mailing Address: 1400 73rd Ave NE, Fridley, MN – 55432 USA

Telephone: 763-574-5361 Email: bart.a.bashynski@cummins.com

Product Information

Product Name: Power Generator Systems

Product Type: Power Generation

Product Model Number: See Table 1
(List all unique product identification numbers and/or part numbers)

General Description: Cummins Power Generators described in table-1: Certified Matrix

Mounting Description: Described in table 1: Certified Product Matrix

Applicant Information

Applicant Company Name: The VMC Group

Contact Person: John P Giuliano, PE

Mailing Address: 113 Main Street, Bloomingdale, NJ 07403

Telephone: (973) 838-1780 Email: john.giuliano@thevmcgroup.com

I hereby agree to reimburse the Office of Statewide Health Planning and Development review fees in accordance with the California Administrative Code, 2013.

Signature of Applicant: Date: 11/16/15

Title: President Company Name: The VMC Group

California Licensed Structural Engineer Responsible for the Engineering and Test Report(s)

Company Name: The VMC Group

Name: Mr. Ken Tarlow California License Number: SE2851

Mailing Address: 113 Main St., Bloomingdale, NJ 07403

Telephone: (973) 838-1780 Email: ken.tarlow@thevmcgroup.com

Supports and Attachments Preapproval

☐ Supports and attachments are preapproved under OPM-
(Separate application for OSHPD Preapproval of Manufacturer's Certification (OPM) of Supports and attachments is required)

☒ Supports and attachments are not preapproved

Certification Method

☒ Testing in accordance with: ☒ ICC-ES AC156

☐ Other (Please Specify):

Testing Laboratory

Company Name: University of California Berkeley, PEER

Contact Name: Clément Barthès

Mailing Address: 1301 S. 46th Street, Building 420, Richmond, CA 94804

Telephone: 1-510-655-3409 Email:

Testing Laboratory

Company Name: Applied Technical Services, inc.

Contact Name: David Common

Mailing Address: 1049 Triad Court, Marietta, GA 30062

Telephone: (770) 423-1400 Email: DavidC@atslab.com

Seismic Parameters

Design in accordance with ASCE 7-10 Chapter 13: ☒ Yes ☐ No

Design Basis of Equipment or Components (F_p/W_p) = See Table 1

S_{DS} (Design spectral response acceleration at short period, g) = See Table 1

a_p (In-structure equipment or component amplification factor) : 2.5

R_p (Equipment or component response modification factor) 2.0

Ω_0 (System overstrength factor) = 2.0

I_p (Importance factor) = 1.5

z/h (Height factor ratio) = See Table 1

Equipment or Component Natural Frequencies (Hz) See Tables 3-41

Overall dimensions and weight (or range thereof) = See Table 1

Equipment or Components @ grade designed in accordance with ASCE 7-10 Chapter 15: ☐ Yes ☒ No

Design Basis of Equipment or Components (V/W) =

S_{DS} (Design spectral response acceleration at short period, g) =

S_{D1} (Design spectral response acceleration at 1 second period, g)

R (Response modification coefficient) =

Ω_0 (System overstrength factor) =

C_d (Deflection amplification factor) =

I_p (Importance factor) = 1.5

Height to Center of Gravity above base =

Equipment or Component Natural Frequencies (Hz) =

Overall dimensions and weight (or range thereof) =

Tank(s) designed in accordance with ASME BPVC, 2010: ☐ Yes ☒ No

List of Attachments Supporting Special Seismic Certification

☒ Test Report(s) ☒ Drawings ☐ Calculations ☐ Manufacturer's Catalog

☐ Other(s) (Please Specify):

OSHPD Approval (For Office Use Only) – Approval Expires on December 31, 2022

Signature: Date: 11/6/2016

Print Name: M. R. Karim Title: SHFR

Special Seismic Certification Valid Up to : S_{DS} (g) = See Above z/h = See Above

Condition of Approval (if applicable):

Table 1A

Certified Product Matrix

Line Item	Gen Models/ Gen Components	Rating (KW)	Dimensions				Mounting Configurations				Engine	Alternator	Controller	Radiator	Enclosure	Fuel Tank	UUT	Line item of book-ending small unit	Line item of book-ending large unit	Sds	z/h	Fp/W
			Max Length (in)	Max Width (in)	Max Height (in)	Max Weight (lbs)	Fuel Tank Options	External Isolators	Internal Isolators	Enclosure Options	Manufacturer	Manufacturer	Manufacturer	Manufacturer	Manufacturer/ Materials	Manufacturer						
1	DGHCA,B,C ***	30,35,40	83	40	50	1,770	None	None	Yes	None	Cummins	Cummins	Cummins	Modine - 4	N/A	N/A	UUT-1			2.48	1	5.58
2	DGHCA,B,C ***	30,35,40	83	40	55	1,783	None	Yes	Yes	None	Cummins	Cummins	Cummins	Modine - 4	N/A	N/A	UUT-2			2.48	1	5.58
3	DGHCA,B,C ***	30,35,40	83	40	73	3,363	UL142/UL2085	None	Yes	None	Cummins	Cummins	Cummins	Modine - 4	N/A	United Alloy Inc	UUT-3/A			2.48	1	5.58
4	DGHCA,B,C ***	30,35,40	83	40	78	3,363	UL142/UL2085	Yes	Yes	None	Cummins	Cummins	Cummins	Modine - 4	N/A	United Alloy Inc	UUT-4/A			2.48	1	5.58
5	DGHCA,B,C ***	30,35,40	102	41	84	2,570	None	None	Yes	Yes	Cummins	Cummins	Cummins	Modine - 4	Cummins	N/A	UUT-5			2.48	1	5.58
6	DGHCA,B,C ***	30,35,40	102	41	107	3,363	UL142/UL2085	None	Yes	Yes	Cummins	Cummins	Cummins	Modine - 4	Cummins	United Alloy Inc	UUT-6/A			2.48	1	5.58
7	DGHCA,B,C ***	30,35,40	83	40	55	1,783	None	Yes	None	None	Cummins	Cummins	Cummins	Modine - 4	N/A	N/A	UUT-7			2.48	1	5.58
8	DGHCA,B,C ***	30,35,40	83	40	66	2,563	UL142/UL2085	Yes	None	None	Cummins	Cummins	Cummins	Modine - 4	N/A	United Alloy Inc	UUT-8/A			2.48	1	5.58
9	DSGAA,B,C,D,E	100, 125, 150, 175, 200	162	44	94	5,660	UL142/UL2085	None	Yes	None	Cummins	Cummins	Cummins	Denso Marston - 7	N/A	United Alloy Inc	UUT-9/A			2.1	1	4.725
9A	DSGAA,B,C,D,E	100, 125, 150, 175, 200	184	44	114	7,500	UL142/UL2085	None	Yes	Yes	Cummins	Cummins	Cummins	Denso Marston - 7	Cummins	United Alloy Inc	UUT-28/A			2.48	0	1.86
																				2	1	4.5
10	DSGAA,B,C,D,E	100, 125, 150, 175, 200	119	44	78	4,200	None	None	Yes	None	Cummins	Cummins	Cummins	Denso Marston - 7	N/A	N/A	UUT-27			2.48	0	1.86
																				2	1	4.5
10A	DSGAA,B,C,D,E	100, 125, 150, 175, 200	180	44	90	6,100	None	None	Yes	Yes	Cummins	Cummins	Cummins	Denso Marston - 7	Cummins	N/A	UUT-29			2.48	0	1.86
																				2	1	4.5
11	DQDAA,B,C	250,275,300	132	50	72	5,600	None	None	Yes	None	Cummins	Cummins	Cummins	Bearward - 7	N/A	N/A	UUT-30			2.48	0	1.86
																				2	1	4.5
11A	DQDAA,B,C	250,275,300	246	90	106	13,400	None	Yes	Yes	Yes	Cummins	Cummins	Cummins	Bearward - 7	Cummins	N/A	UUT-32			2.48	0	1.86
																				2	1	4.5
12	DQDAA,B,C	250,275,300	244	90	122	12,200	UL142/UL2085	Yes	Yes	None	Cummins	Cummins	Cummins	Bearward - 7	N/A	Tramont	UUT-31/A			2.48	0	1.86
																				2	1	4.5
12A	DQDAA,B,C	250,275,300	266	90	134	18,100	UL142/UL2085	Yes	Yes	Yes	Cummins	Cummins	Cummins	Bearward - 7	Cummins	Tramont	UUT-33/A			2.48	0	1.86
																				2	1	4.5
15	DQHAA,B	275, 300	136	60	71	6,008	None	None	Yes	None	Cummins	Cummins	Cummins	Enterex - 16	N/A	N/A	Extrapolated	17	17	2.28	1	5.13
15A	DQHAA,B	275, 300	136	60	77	6,008	None	Yes	Yes	None	Cummins	Cummins	Cummins	Enterex - 16	N/A	N/A	Extrapolated	17	17	2.28	1	5.13
15B	DQHAA,B	275, 300	170	80	85	6,861	None	Yes	Yes	None	Cummins	Cummins	Cummins	Enterex - 16	N/A	N/A	Extrapolated	17	17	2.28	1	5.13
16	DQHAA,B	275, 300	226	80	100	11,122	None	Yes	Yes	Yes	Cummins	Cummins	Cummins	Enterex - 16	Cummins	N/A	UUT-10			2.28	1	5.13
17	DQHAA,B	275, 300	226	80	113	23,782	UL142/UL2085	Yes	Yes	None	Cummins	Cummins	Cummins	Enterex - 16	N/A	Tramont	Interpolated	18	18	2.28	1	5.13
18	DQHAA,B	275, 300	226	80	128	27,715	UL142/UL2085	Yes	Yes	Yes	Cummins	Cummins	Cummins	Enterex - 16	Cummins	Tramont	UUT-11/A			2.28	1	5.13
19	Enclosure for DFEG,H,J,K*	350, 400, 450, 500	234	82	92	5,053	none	Yes	Yes	Yes	N/A	N/A	N/A	N/A	Cummins	N/A	interpolated	16	16	1.94	0	1.455
20	Enclosure for DFEG,H,J,K*	350, 400, 450, 500	234	82	128	8,809	UL142/UL2085	Yes	Yes	Yes	N/A	N/A	N/A	N/A	Cummins	N/A	interpolated	18	18	1.94	0	1.455
21	DQCA,B,C	600, 750, 800	173	67	98	15,646	None	Yes	None	None	Cummins	Cummins	Cummins	Bearward - 25^	N/A	N/A	Extrapolated	25	41	1.94	0	1.455
22	DQCA,B,C	600, 750, 800	315	102	131	43,156	UL142/UL2085	Yes	None	None	Cummins	Cummins	Cummins	Bearward - 25^	N/A	United Alloy Inc	Extrapolated	26	42	1.94	0	1.455
23	DQCA,B,C	600, 750, 800	315	102	119	29,291	None	Yes	None	Yes	Cummins	Cummins	Cummins	Bearward - 25^	Cummins	N/A	Extrapolated	27	43	1.94	0	1.455
24	DQCA,B,C	600, 750, 800	338	102	142	52,082	UL142/UL2085	Yes	None	Yes		Cummins	Cummins	Bearward - 25^	Cummins	United Alloy Inc	Extrapolated	28	44	1.94	0	1.455
25	DQFAA,B,C,D,H	750, 800, 900, 1000, 1000	167	79	105	17,480	None	Yes	None	None	Cummins	Cummins	Cummins	AKG-34 or Bearward - 32^	N/A	N/A	Interpolated	27	27	1.94	0	1.455
25A	DQFAA,B,C,D,H	750, 800, 900, 1000, 1000	200	102	112	19,647	None	Yes	None	None	Cummins	Cummins	Cummins	AKG-34 or Bearward - 32^	N/A	N/A	UUT-34/B			1.94	0	1.455
26	DQFAA,B,C,D,H	750, 800, 900, 1000, 1000	338	102	138	45,202	UL142/UL2085	Yes	None	None	Cummins	Cummins	Cummins	AKG-34 or Bearward - 32^	N/A	United Alloy Inc	Interpolated	28	28	1.94	0	1.455
27	DQFAA,B,C,D,H	750, 800, 900, 1000, 1000	315	102	119	29,794	None	Yes	None	Yes	Cummins	Cummins	Cummins	AKG-34 or Bearward - 32^	Cummins	N/A	UUT-13			1.94	0	1.455
28	DQFAA,B,C,D,H	750, 800, 900, 1000, 1000	338	102	142	54,216	UL142/UL2085	Yes	None	Yes	Cummins	Cummins	Cummins	AKG-34 or Bearward - 32^	Cummins	United Alloy Inc	UUT-12/A, 34/A			1.94	0	1.455
35	DQGAE,F,S	1250, 1500, 1500	254	98	123	33,556	None	None	Yes	None	Cummins	Cummins	Cummins	Modine - 43 Modine - 65^	N/A	N/A	Interpolated	1	45	2.1	1	4.725
36	DQGAE,F,S	1250, 1500, 1500	254	98	123	33,556	None	Yes	Yes	None	Cummins	Cummins	Cummins	Modine - 43 Modine - 65^	N/A	N/A	Interpolated	2	46	1.94	1	4.365
37	DQGAE,F,S	1250, 1500, 1500	254**	98**	123**	33,556**	UL142/UL2085	None	Yes	None	Cummins	Cummins	Cummins	Modine - 43 Modine - 65^	N/A	Note 2	Interpolated	3	47	2.1	0	1.575
38	DQGAE,F,S	1250, 1500, 1500	254**	98**	123**	33,556**	UL142/UL2085	Yes	Yes	None	Cummins	Cummins	Cummins	Modine - 43 Modine - 65^	N/A	Note 2	Interpolated	4	48	2.1	0	1.575
39	DQGAE,F,S	1250, 1500, 1500	254**	98**	123**	33,556**	None	None	Yes	Note 1	Cummins	Cummins	Cummins	Modine - 43 Modine - 65^	Note 1	N/A	Interpolated	5	49	2.1	1	4.725
40	DQGAE,F,S	1250, 1500, 1500	254**	98**	123**	33,556**	UL142/UL2085	None	Yes	Note 1	Cummins	Cummins	Cummins	Modine - 43 Modine - 65^	Note 1	Note 2	Interpolated	6	50	2.1	0	1.575
41	DQKAA,B	1750, 2000	244	100	120	35,846	None	Yes	None	None	Cummins	Cummins	Cummins	Bearward - 63^	N/A	N/A	UUT-14			1.94	0	1.455
42	DQKAA,B	1750, 2000	244**	100**	120**	35,846**	UL142/UL2085	Yes	None	None	Cummins	Cummins	Cummins	Bearward - 63^	N/A	Note 2	UUT-15/A			1.94	0	1.455
43	DQKAA,B	1750, 2000	244**	100**	120**	35,846**	None	Yes	None	Note 1	Cummins	Cummins	Cummins	Bearward - 63^	Note 1	N/A	Extrapolated	41	41	1.94	0	1.455
44	DQKAA,B	1750, 2000	244**	100**	120**	35,032**	UL142/UL2085	Yes	None	Note 1	Cummins	Cummins	Cummins	Bearward - 63^	Note 1	Note 2	Extrapolated	42	42	1.94	0	1.455
45	DQKAD,E,F,M	1750, 2000, 2250, 2250	275	98	161	43,805	None	None	Yes	None	Cummins	Cummins	Cummins	Modine - 104^	N/A	N/A	UUT-16			2.1	1	4.725
46	DQKAD,E,F,M	1750, 2000, 2250, 2250	275	98	161	43,805	None	Yes	Yes	None	Cummins	Cummins	Cummins	Modine - 104^	N/A	N/A	UUT-17			1.94	1	4.365
47	DQKAD,E,F,M	1750, 2000, 2250, 2250	275**	98**	161**	43,805**	UL142/UL2085	None	Yes	None	Cummins	Cummins	Cummins	Modine - 104^	N/A	Note 2	UUT-18/A			2.1	0	1.575
48	DQKAD,E,F,M	1750, 2000, 2250, 2250	275**	98**	161**	43,805**	UL142/UL2085	Yes	Yes	None	Cummins	Cummins	Cummins	Modine - 104^	N/A	Note 2	UUT-19/A			2.1	0	1.575
49	DQKAD,E,F,M	1750, 2000, 2250, 2250	275**	98**	161**	43,805**	None	None	Yes	Note 1	Cummins	Cummins	Cummins	Modine - 104^	Note 1	N/A	Extrapolated	45	45	2.1	1	4.725
50	DQKAD,E,F,M	1750, 2000, 2250, 2250	275**	98**	161**	43,805**	UL142/UL2085	None	Yes	Note 1	Cummins	Cummins	Cummins	Modine - 104^	Note 1	Note 2	Extrapolated	47	47	2.1	0	1.575

Table 1A, cont'd

Certified Product Matrix

Line Item	Gen Models/ Gen Components	Rating (KW)	Dimensions				Mounting Configurations				Engine	Alternator	Controller	Radiator	Enclosure	Fuel Tank	UUT	Line item of book-ending small unit	Line item of book-ending large unit	Sds	z/h	Fp/W
			Max Length (in)	Max Width (in)	Max Height (in)	Max Weight (lbs)	Fuel Tank Options	External Isolators	Internal Isolators	Enclosure Options	Mfr	Mfr	Mfr	Mfr	Mfr/Mtl	Mfr						
51	DQKAN	2500	278**	104**	125**	51,366**	UL142/UL2085	Yes	None	None	Cummins	Cummins	Cummins	IEA - 66	N/A	Note 2	Interpolated	41	55 & 65	1.94	0	1.455
52	DQKAN	2500	278**	104**	125**	51,366**	None	Yes	None	None	Cummins	Cummins	Cummins	IEA - 66	N/A	N/A	Interpolated	41	56 & 66	1.94	0	1.455
53	DQKAN	2500	278**	104**	125**	51,366**	UL142/UL2085	Yes	None	Note 1	Cummins	Cummins	Cummins	IEA - 66	Note 1	Note 2	Interpolated	51	51	1.94	0	1.455
54	DQKAN	2500	278**	104**	125**	51,366**	None	Yes	None	Note 1	Cummins	Cummins	Cummins	IEA - 66	Note 1	N/A	Interpolated	52	52	1.94	0	1.455
55	DQLE, DQLF, DQLH	2500, 2750 2750	282**	117**	134**	52,985**	UL142/UL2085	Yes	None	None	Cummins	Cummins	Cummins	IEA - 72 IEA - 100	N/A	Note 2	UUT-20/A			2.1	0	1.575
56	DQLE, DQLF, DQLH	2500, 2750 2750	282	117	134	52,985	None	Yes	None	None	Cummins	Cummins	Cummins	IEA - 72 IEA - 100	N/A	N/A	UUT-21			2.1	0	1.575
57	DQLE, DQLF, DQLH	2500, 2750 2750	282	117	134	52,985	None	Yes	None	None	Cummins	Cummins	Cummins	IEA - 72 IEA - 100	N/A	N/A	UUT-22			2	1	4.5
58	DQLE, DQLF, DQLH	2500, 2750 2750	282**	117**	134**	52,985**	UL142/UL2085	Yes	None	Note 1	Cummins	Cummins	Cummins	IEA - 72 IEA - 100	Note 1	Note 2	Extrapolated	51	51	2.1	0	1.575
59	DQLE, DQLF, DQLH	2500, 2750 2750	282**	117**	134**	52,985**	None	Yes	None	Note 1	Cummins	Cummins	Cummins	IEA - 72 IEA - 100	Note 1	N/A	Extrapolated	52	52	2.1	0	1.575
60	DQLE, DQLF, DQLH	2500, 2750 2750	282**	117**	134**	52,985**	None	Yes	None	Note 1	Cummins	Cummins	Cummins	IEA - 72 IEA - 100	Note 1	N/A	Extrapolated	53	53	2	1	4.5
61	DQLE, DQLF, DQLH	2500, 2750 2750	220**	117**	122**	45,384**	UL142/UL2085	Yes	None	None	Cummins	Cummins	Cummins	N/A	N/A	Note 2	UUT-23/A			2.1	0	1.575
62	DQLE, DQLF, DQLH	2500, 2750 2750	220	117	122	45,384	None	Yes	None	None	Cummins	Cummins	Cummins	N/A	N/A	N/A	UUT-24			2	1	4.5
63	DQLE, DQLF, DQLH	2500, 2750 2750	220**	117**	122**	45,384**	UL142/UL2085	Yes	None	Note 1	Cummins	Cummins	Cummins	N/A	Note 1	Note 2	Extrapolated	57	57	2.1	0	1.575
64	DQLE, DQLF, DQLH	2500, 2750 2750	220**	117**	122**	45,384**	None	Yes	None	Note 1	Cummins	Cummins	Cummins	N/A	Note 1	N/A	Extrapolated	58	58	2	1	4.5
65	DQLE, DQLF, DQLH	2500, 2750 2750	292**	125**	153**	57,168**	UL142/UL2085	Yes	None	None	Cummins	Cummins	Cummins	IEA - 72 IEA - 100	N/A	Note 2	UUT-25/A			2.1	0	1.575
66	DQLE, DQLF, DQLH	2500, 2750 2750	292	125	153	57,168	None	Yes	None	None	Cummins	Cummins	Cummins	IEA - 72 IEA - 100	N/A	N/A	UUT-26			2	1	4.5
67	DQLE, DQLF, DQLH	2500, 2750 2750	292**	125**	153**	57,168**	UL142/UL2085	Yes	None	Note 1	Cummins	Cummins	Cummins	IEA - 72 IEA - 100	Note 1	Note 2	Extrapolated	61	61	2.1	0	1.575
68	DQLE, DQLF, DQLH	2500, 2750 2750	292**	125**	153**	57,168**	None	Yes	None	Note 1	Cummins	Cummins	Cummins	IEA - 72 IEA - 100	Note 1	N/A	Extrapolated	62	62	2	1	4.5
69	DFEJ,K	450,500	152	60	71	10,005	None	None	Yes	None	Cummins	Cummins	Cummins	Enterex - 16	N/A	N//A	Interpolated	1	45	1.94	0	1.455
70	DFEJ,K	450,500	152	60	77	10,125	None	Yes	Yes	None	Cummins	Cummins	Cummins	Enterex - 16	N/A	N/A	Interpolated	2	46	1.94	0	1.455
71	DFEJ,K	450,500	170	86	85	11,122	None	Yes	Yes	None	Cummins	Cummins	Cummins	Enterex - 16	N/A	N/A	Interpolated	2	27	1.94	0	1.455
72	DFEJ,K	450,500	346	86	113	34,621	UL142/UL2085	Yes	Yes	None	Cummins	Cummins	Cummins	Enterex - 16	N/A	Tramont	Interpolated	4	48	1.94	0	1.455
73	DFEJ,K	450,500	233	86	100	16,077	None	Yes	Yes	Yes	Cummins	Cummins	Cummins	Enterex - 16	Cummins Carbon Steel	N/A	Interpolated	17	27	1.94	0	1.455
74	DFEJ,K	450,500	366	86	128	39,245	UL142/UL2085	Yes	Yes	Yes	Cummins	Cummins	Cummins	Enterex - 16	Cummins Carbon Steel	Tramont	Interpolated	18	28	1.94	0	1.455
75	Controller for DFEJ,K	450,500	32	14	66	360	N/A	N/A	N/A	N/A	N/A	N/A	Cummins	N/A	N/A	N/A	UUT-35A/35B			1.94	0	1.455
76	Controller for DQCx, DQFAx	450,500	41	49	72	650	N/A	N/A	N/A	N/A	N/A	N/A	Cummins	N/A	N/A	N/A	UUT-36A/36B			1.94	0	1.455
77	DSHAD	230	105	40	54	3,488	None	None	Yes	None	Cummins	Cummins	Cummins	Enterex - 7	N/A	N//A	Interpolated	1	45	2.28	0	1.71
																				2.28	1	5.13
78	DSHAD	230	105	40	59	3,488	None	Yes	Yes	None	Cummins	Cummins	Cummins	Enterex - 7	N/A	N/A	Interpolated	2	46	2.28	0	1.71
																				2.28	1	5.13
79	DSHAD	230	105	40	86	7,024	UL142/UL2085	none	Yes	None	Cummins	Cummins	Cummins	Enterex - 7	N/A	United Alloy	Interpolated	3	47	2.28	0	1.71
																				2.28	1	5.13
80	DSHAD	230	143	42	78	4,832	None	none	Yes	Yes	Cummins	Cummins	Cummins	Enterex - 7	Cummins Aluminum	N/A	Interpolated	5	84	2.28	0	1.71
																				2.28	1	5.13
81	DSHAD	230	143	42	83	4,832	None	Yes	Yes	Yes	Cummins	Cummins	Cummins	Enterex - 7	Cummins Aluminum	N/A	Interpolated	6	11A	2.28	0	1.71
																				2.28	1	5.13
82	DSHAD	230	143	42	110	8,368	UL142/UL2085	none	Yes	Yes	Cummins	Cummins	Cummins	Enterex - 7	Cummins Aluminum	United Alloy	UUT-37			2.28	0	1.71
																				2.28	1	5.13
83	DQGAA, DQGAB	1250, 1500	235	79	112	29,262	None	Yes	None	None	Cummins	Cummins	Cummins	Bearward - 54	N/A	N/A	Interpolated	7	41	1.94	0	1.46
84	DQGAA, DQGAB	1250, 1500	235**	79**	112**	29,262**	UL142/UL2085	Yes	None	None	Cummins	Cummins	Cummins	Bearward - 54	N/A	Note 2	Interpolated	8	42	1.94	0	1.46
85	DQGAA, DQGAB	1250, 1500	235**	79**	112**	29,262**	None	Yes	None	Note 1	Cummins	Cummins	Cummins	Bearward - 54	Note 1	N/A	Interpolated	27	43	1.94	0	1.46
86	DQGAA, DQGAB	1250, 1500	235**	79**	112**	29,262**	UL142/UL2085	Yes	None	Note 1	Cummins	Cummins	Cummins	Bearward - 54	Note 1	Note 2	Interpolated	28	44	1.94	0	1.46

Note*: These genset models are previously certified (per OSP-0028) but with out the enclosures
Note^: Gensets are also approved in remote-mounted radiator configurations. Radiators are structurally independent of other genset components.
Note**: Sizes and weights do not include fuel tanks and enclosures.
Note****: Models are no longer available.
Note 1: Enclosures are not part of the approval and shall require separate OSHPD approval. Enclosure and Genset should be structurally independent (not supporting each other)
Note 2: Fuel tanks are not part of the approval and shall require separate OSHPD approval.
Note 3: External isolators are defined as spring isolators attaching the genset skid to a supporting structure / foundation that is not a component of of the genset system
Note 4: The configuration (components used) used for the test is (are) underlined.
Note 5: Max dimensions and weights listed in Table 1 are different from UUT's listed dimensins and weights in table 2 because of variations in tank and alternator size.

Table 1B

Certified Sub-Component Matrixes

ENGINE			
Model #	**Manufacturer**	**Material**	**Tested/Interpolated**
4BT3.3	Cummins	Cast Iron	UUT-1, 2, 3, 4, 5, 6, 7, 8
QSB7	Cummins	Cast Iron	UUT-9,UUT-27 to UUT-29
QSL9-G2	Cummins	Cast Iron	UUT-37
QSL9-G7	Cummins	Cast Iron	UUT-30 to UUT-33
QSM11	Cummins	Cast Iron	UUT-10,11
QSX15	Cummins	Cast Iron	Interpolated
QSK23	Cummins	Cast Iron	Interpolated
QST30	Cummins	Cast Iron	UUT-12,13, 34/A, 34/B
QSK50 Tier 2	Cummins	Cast Iron	Interpolated
QSK50 Trinity	Cummins	Cast Iron	Interpolated
QSK60	Cummins	Cast Iron	UUT-14,15
QSK60 Trinity	Cummins	Cast Iron	UUT-16,17,18,19
QSK78	Cummins	Cast Iron	UUT-20 to UUT-26

ALTERNATOR			
Model #	**Manufacturer**	**Material**	**Tested/Interpolated**
UC224	Cummins	Steel Laminations & Copper windings	UUT-1, 2, 3 ,4, 5, 6, 7, 8
UC3	Cummins	Steel Laminations & Copper windings	UUT-9, 27, 28, 29
UC27	Cummins	Steel Laminations & Copper windings	UUT-37
HC4	Cummins	Steel Laminations & Copper windings	UUT-10, 11, 30, 31, 32, 33
HC5	Cummins	Steel Laminations & Copper windings	Interpolated
HC6	Cummins	Steel Laminations & Copper windings	UUT - 34/A 34/B
P7	Cummins	Steel Laminations & Copper windings	UUT-12,13,14,15
MV7	Cummins	Steel Laminations & Copper windings	Interpolated
P80 : LV	Cummins	Steel Laminations & Copper windings	UUT-16,17,18,19
P80 : MV	Cummins	Steel Laminations & Copper windings	Interpolated
P80 : HV	Cummins	Steel Laminations & Copper windings	UUT-20 to UUT-26

CONTROLLER		
Model #	**Manufacturer**	**Tested/Interpolated**
PCC2100	Cummins	UUT-1, 2, 3, 4, 5, 6, 7, 8, 10, 11, 30, 31, 32, 33,37
PCC2300	Cummins	UUT-9, 27, 28, 29
PCC3201	Cummins	UUT-12, 13, 14, 15
PCC3300	Cummins	UUT-16 to UUT-26
PC 2.3	Cummins	Extrapolated
PC 3.3	Cummins	UUT 34/A, 34/B, 35/A, 35/B, 36/A, 36/B

RADIATOR				
Manufacturer	**Core Size [ft²]**	**Material**		**Tested / Interpolated**
		Core (fin+tube)	**Supporting structure**	
Modine Mfg	4	Copper/Brass	Carbon Steel	1,2,3,4,5,6,7,8
	43	Copper/Brass	Carbon Steel	interpolated
	65	Copper/Brass	Carbon Steel	interpolated
	104	Copper/Brass	Carbon Steel	16, 17, 18, 19
Denso Marston	7	Copper/Brass	Carbon Steel	9,27,28,29
Bearward	7	Copper/Brass	Carbon Steel	30,31,32,32
	10	Copper/Brass	Carbon Steel	interpolated
	25	Copper/Brass	Carbon Steel	interpolated
	32	Copper/Brass	Carbon Steel	12,13
	54	Copper/Brass	Carbon Steel	interpolated
	63	Copper/Brass	Carbon Steel	14,15
Enterex				
	16	Aluminum	Carbon Steel	10,11
AKG	34	Aluminum	Carbon Steel	34/A,34/B
IEA	66	Copper/Brass	Carbon Steel	extrapolated
	66	Copper/Brass	Carbon Steel	extrapolated
	72	Copper/Brass	Carbon Steel	20, 21, 22
	100	Copper/Brass	Carbon Steel	25, 26

ENCLOSURE			
Model Name	**Manufacturer**	**Material**	**Tested / Interpolated**
Sentinel	Cummins	Carbon Steel	UUT-5, 6
Sentinel	Cummins	Aluminum	37
QSB7 Enclosure	Cummins	Carbon Steel	UUT- 28, 29
Thor-I	Cummins	Carbon Steel	UUT-10,11, 32, 33
Thor-II	Cummins	Carbon Steel	UUT-12, 13, 34/A, 34/B

FUEL TANK		
Manufacturer	**Material**	**Tested/Interpolated**
Tramont	Carbon Steel	UUT-11, 31, 33
UAI (United Alloy Inc)	Carbon Steel	UUT- 3, 4, 6, 8, 9, 12, 28, 34/A, 37

Table 2

Certified Sub-Component Matrixes

RADIATOR				
Manufacturer	Core Size [ft²]	Material		Tested / Interpolated
		Core (fin+tube)	Supporting structure	
Modine Mfg	4	Copper/Brass	Carbon Steel	1,2,3,4,5,6,7,8
	43	Copper/Brass	Carbon Steel	interpolated
	65	Copper/Brass	Carbon Steel	interpolated
	104	Copper/Brass	Carbon Steel	16, 17, 18, 19
Denso Marston	7	Copper/Brass	Carbon Steel	9,27,28,29
Bearward	7	Copper/Brass	Carbon Steel	30,31,32,32
	10	Copper/Brass	Carbon Steel	interpolated
	25	Copper/Brass	Carbon Steel	interpolated
	32	Copper/Brass	Carbon Steel	12,13
	54	Copper/Brass	Carbon Steel	interpolated
	63	Copper/Brass	Carbon Steel	14,15
Enterex	7	Aluminum	Carbon Steel	37
	16	Aluminum	Carbon Steel	10,11
AKG	34	Aluminum	Carbon Steel	34/A,34/B
IEA	66	Copper/Brass	Carbon Steel	extrapolated
	66	Copper/Brass	Carbon Steel	extrapolated
	72	Copper/Brass	Carbon Steel	20, 21, 22
	100	Copper/Brass	Carbon Steel	25, 26

ENCLOSURE			
Model Name	Manufacturer	Material	Tested / Interpolated
Sentinel	Cummins	Carbon Steel	UUT-5, 6
QSB7 Enclosure	Cummins	Carbon Steel	UUT- 28, 29
Thor-I	Cummins	Carbon Steel	UUT-10,11, 32, 33
Thor-II	Cummins	Carbon Steel	UUT-12, 13, **34/A, 34/B**

FUEL TANK		
Manufacturer	Material	Tested/Interpolated
Tramont	Carbon Steel	UUT-11, 31, 33
UAI (United Alloy Inc)	Carbon Steel	UUT- 3, 4, 6, 8, 9, 12, 28, **34/A**

Table 2A

Tested Product Configurations

Line Item	Genset Models	Rating (KW)	Dimensions				Engine	Alternator	Controller	Radiator	Enclosure	Fuel Tank	UUT
			Length (in)	Width (in)	Height (in)	Weight (lbs)	Model	Model	Model	Manufacturer	Model	Manufacturer	
1	DGHCC	40	83	40	50	1,770	4BT3.3	UC224	PCC2100	Modine -4	N/A	N/A	UUT-1
2	DGHCC	40	83	40	55	1,783	4BT3.3	UC224	PCC2100	Modine -4	N/A	N/A	UUT-2
3	DGHCC	40	83	40	73	2,522	4BT3.3	UC224	PCC2100	Modine -4	N/A	UAI (United Alloy Inc)	UUT-3/A
4	DGHCC	40	83	40	66	2,283	4BT3.3	UC224	PCC2100	Modine -4	N/A	UAI (United Alloy Inc)	UUT-4/A
5	DGHCC	40	102	41	77	2,570	4BT3.3	UC224	PCC2100	Modine -4	Sentinal	N/A	UUT-5
6	DGHCC	40	102	41	88	3,070	4BT3.3	UC224	PCC2100	Modine -4	Sentinal	UAI (United Alloy Inc)	UUT-6/A
7	DGHCC	40	83	40	55	1,783	4BT3.3	UC224	PCC2100	Modine -4	N/A	N/A	UUT-7
8	DGHCC	40	83	40	66	2,283	4BT3.3	UC224	PCC2100	Modine -4	N/A	UAI (United Alloy Inc)	UUT-8/A
9	DSGAA	100	119	44	93	4,707	QSB7	UC3	PCC2300	Denso Marston - 7	N/A	UAI (United Alloy Inc)	UUT-9/A
10	DSGAA	100	118	44	66	3,209	QSB7	UC3	PCC2300	Denso Marston - 7	N/A	N/A	UUT-27
9A	DSGAA	100	172	44	108	6,557	QSB7	UC3	PCC2300	Denso Marston - 7	QSB7 Enclosure	UAI (United Alloy Inc)	UUT-28/A
10A	DSGAA	100	168	44	84	5,083	QSB7	UC3	PCC2300	Denso Marston - 7	QSB7 Enclosure	N/A	UUT-29
11	DQDAC	300	119	50	66	5,113	QSL9	HC4	PCC2100	Bearward -7	N/A	N/A	UUT-30
12	DQDAC	300	222	90	116	11,769	QSL9	HC4	PCC2100	Bearward -7	N/A	Tramont	UUT-31/A
11A	DQDAC	300	233	90	100	13,039	QSL9	HC4	PCC2100	Bearward -7	Thor I	N/A	UUT-32
12A	DQDAC	300	232	90	128	17,695	QSL9	HC4	PCC2100	Bearward -7	Thor-I	Tramont	UUT-33/A
17	DQHAA	275	170	80	100	10,392	QSM11	HC4	PCC2100	Enterex - 16	Thor-I	N/A	UUT-10
18	DQHAA	275	170	80	118	14,270	QSM11	HC4	PCC2100	Enterex - 16	Thor-I	Tramont	UUT-11/A
25A	DQFAD	1000	338	102	167	18,642	QST30	HC6	PC 3.3	AKG-34	N/A	N/A	UUT-34/B
27	DQFAD	1000	315	102	119	29,794	QST30	P7	PCC3201	Bearward - 32	Thor-II	N/A	UUT-13
28	DQFAD	1000	338	102	137	33,259	QST30	P7	PCC3201	Bearward - 32	Thor-II	UAI (United Alloy Inc)	UUT-12/A
	DQFAD	1000	338	102	167	53,425	QST30	HC6	PC 3.3	AKG-34	Thor II	UAI (United Alloy Inc)	UUT-34/A
41	DQKAB	2000	244	100	120	35,846	QSK60	P7	PCC3201	Bearward - 63	N/A	N/A	UUT-14
42	DQKAB	2000	244	100	152	57,848	QSK60	P7	PCC3201	Bearward - 63	N/A	IBI	UUT-15/A
45	DQKAF	2250	275	98	161	43,805	QSK60 Trinity	P80 : LV	PCC3300	Modine - 104	N/A	N/A	UUT-16
46	DQKAF	2250	275	98	167	44,405	QSK60 Trinity	P80 : LV	PCC3300	Modine - 104	N/A	N/A	UUT-17
47	DQKAF	2250	275	98	185	65,895	QSK60 Trinity	P80 : LV	PCC3300	Modine - 104	N/A	IBI	UUT-18/A
48	DQKAF	2250	275	98	191	66,495	QSK60 Trinity	P80 : LV	PCC3300	Modine - 104	N/A	IBI	UUT-19/A
55	DQLF	2750	308	122	159	59,385	QSK78	P80 : HV	PCC3300	IEA - 72	N/A	GPC	UUT-20/A
56	DQLF	2750	282	117	134	52,985	QSK78	P80 : HV	PCC3300	IEA - 72	N/A	N/A	UUT-21
57	DQLF	2750	282	117	134	52,985	QSK78	P80 : HV	PCC3300	IEA - 72	N/A	N/A	UUT-22
61	DQLF	2750	308	122	147	51,784	QSK78	P80 : HV	PCC3300	N/A	N/A	GPC	UUT-23/A
62	DQLF	2750	220	117	122	45,384	QSK78	P80 : HV	PCC3300	N/A	N/A	N/A	UUT-24
65	DQLF	2750	308	125	178	63,568	QSK78	P80 : HV	PCC3300	IEA - 100	N/A	GPC	UUT-25/A
66	DQLF	2750	292	125	153	57,168	QSK78	P80 : HV	PCC3300	IEA - 100	N/A	N/A	UUT-26
75	Controller for DFEJ,K	450, 500	32	14	66	360	N/A	N/A	Cummins	N/A	N/A	N/A	UUT-35A/35B
76	Controller for DQCx, DQFAx	450, 500	41	49	72	650	N/A	N/A	Cummins	N/A	N/A	N/A	UUT-36A/36B
82	DSHAD	230	143	42	110	8,368	Cummins	Cummins	Cummins	Enterex - 7	Cummins Aluminum	United Alloy	UUT-37

Table 2B

Tested Sub-Component Configurations

Sub-Assembly UUT Description	Evaluated Subcomponents	UUT Dimensions			Weight (lbs)	Manufacturer	Related Model(s)	Sds	z/h	Fp/W	UUT #'s	Test Report UUT #'s	Test report
		Depth (x) (ins)	Width (y) (ins)	Height (z) (ins)									
PC 3.3 genset controller and 2x Schneider P'frame motorized breaker on carbon steel support	PC 3.3 controller Controller enclosure, carbon steel. Support for controller and breaker, carbon steel.	41	48.6	72	650	Cummins	DQCx, DQFAx	1.94	0	1.455	36/A, 36/B	1A, 1/B	D232865
PC 3.3 genset control and SENS battery charger on carbon steel pedestal support	PC 3.3 controller Carbon steel pedestal support (for controller and charger)	32.2	14	65.5	360	Cummins	DFEK/J	1.94	0	1.455	35/A, 35/B	2A, 2/B	D232865

Table 2A

Tested Product Configurations

Line Item	Genset Models	Rating (KW)	Dimensions				Engine	Alternator	Controller	Radiator	Enclosure	Fuel Tank	UUT
			Length (in)	Width (in)	Height (in)	Weight (lbs)	Model	Model	Model	Manufacturer	Model	Manufacturer	
1	DGHCC	40	83	40	50	1770	4BT3.3	UC224	PCC2100	Modine -4	N/A	N/A	UUT-1
2	DGHCC	40	83	40	55	1783	4BT3.3	UC224	PCC2100	Modine -4	N/A	N/A	UUT-2
3	DGHCC	40	83	40	73	2522	4BT3.3	UC224	PCC2100	Modine -4	N/A	UAI (United Alloy Inc)	UUT-3/A
4	DGHCC	40	83	40	66	2283	4BT3.3	UC224	PCC2100	Modine -4	N/A	UAI (United Alloy Inc)	UUT-4/A
5	DGHCC	40	102	41	77	2570	4BT3.3	UC224	PCC2100	Modine -4	Sentinal	N/A	UUT-5
6	DGHCC	40	102	41	88	3070	4BT3.3	UC224	PCC2100	Modine -4	Sentinal	UAI (United Alloy Inc)	UUT-6/A
7	DGHCC	40	83	40	55	1783	4BT3.3	UC224	PCC2100	Modine -4	N/A	N/A	UUT-7
8	DGHCC	40	83	40	66	2283	4BT3.3	UC224	PCC2100	Modine -4	N/A	UAI (United Alloy Inc)	UUT-8/A
9	DSGAA	100	119	44	93	4707	QSB7	UC3	PCC2300	Denso Marston - 7	N/A	UAI (United Alloy Inc)	UUT-9/A
10	DSGAA	100	118	44	66	3,209	QSB7	UC3	PCC2300	Denso Marston - 7	N/A	N/A	UUT-27
9A	DSGAA	100	172	44	108	6,557	QSB7	UC3	PCC2300	Denso Marston - 7	QSB7 Enclosure	UAI (United Alloy Inc)	UUT-28/A
10A	DSGAA	100	168	44	84	5,083	QSB7	UC3	PCC2300	Denso Marston - 7	QSB7 Enclosure	N/A	UUT-29
11	DQDAC	300	119	50	66	5,113	QSL9	HC4	PCC2100	Bearward -7	N/A	N/A	UUT-30
12	DQDAC	300	222	90	116	11,769	QSL9	HC4	PCC2100	Bearward -7	N/A	Tramont	UUT-31/A
11A	DQDAC	300	233	90	100	13,039	QSL9	HC4	PCC2100	Bearward -7	Thor I	N/A	UUT-32
12A	DQDAC	300	232	90	128	17,695	QSL9	HC4	PCC2100	Bearward -7	Thor-I	Tramont	UUT-33/A
17	DQHAA	275	170	80	100	10,392	QSM11	HC4	PCC2100	Enterex - 16	Thor-I	N/A	UUT-10
18	DQHAA	275	170	80	118	14,270	QSM11	HC4	PCC2100	Enterex - 16	Thor-I	Tramont	UUT-11/A
25A	DQFAD	1000	338	102	167	18,642	QST30	HC6	PC 3.3	AKG-34	N/A	N/A	UUT-34/B
27	DQFAD	1000	315	102	119	29,794	QST30	P7	PCC3201	Bearward - 32	Thor-II	N/A	UUT-13
28	DQFAD	1000	338	102	137	33,259	QST30	P7	PCC3201	Bearward - 32	Thor-II	UAI (United Alloy Inc)	UUT-12/A
	DQFAD	1000	338	102	167	53,425	QST30	HC6	PC 3.3	AKG-34	Thor II	UAI (United Alloy Inc)	UUT-34/A
41	DQKAB	2000	244	100	120	35,846	QSK60	P7	PCC3201	Bearward - 63	N/A	N/A	UUT-14
42	DQKAB	2000	244	100	152	57,848	QSK60	P7	PCC3201	Bearward - 63	N/A	IBI	UUT-15/A
45	DQKAF	2250	275	98	161	43,805	QSK60 Trinity	P80 : LV	PCC3300	Modine - 104	N/A	N/A	UUT-16
46	DQKAF	2250	275	98	167	44,405	QSK60 Trinity	P80 : LV	PCC3300	Modine - 104	N/A	N/A	UUT-17
47	DQKAF	2250	275	98	185	65,895	QSK60 Trinity	P80 : LV	PCC3300	Modine - 104	N/A	IBI	UUT-18/A
48	DQKAF	2250	275	98	191	66,495	QSK60 Trinity	P80 : LV	PCC3300	Modine - 104	N/A	IBI	UUT-19/A
55	DQLF DQLH	2750	308	122	159	59,385	QSK78	P80 : HV	PCC3300	IEA - 72	N/A	GPC	UUT-20/A
56	DQLF DQLH	2750	282	117	134	52,985	QSK78	P80 : HV	PCC3300	IEA - 72	N/A	N/A	UUT-21
57	DQLF DQLH	2750	282	117	134	52,985	QSK78	P80 : HV	PCC3300	IEA - 72	N/A	N/A	UUT-22
61	DQLF DQLH	2750	308	122	147	51,784	QSK78	P80 : HV	PCC3300	N/A	N/A	GPC	UUT-23/A
62	DQLF DQLH	2750	220	117	122	45,384	QSK78	P80 : HV	PCC3300	N/A	N/A	N/A	UUT-24
65	DQLF DQLH	2750	308	125	178	63,568	QSK78	P80 : HV	PCC3300	IEA - 100	N/A	GPC	UUT-25/A
66	DQLF DQLH	2750	292	125	153	57,168	QSK78	P80 : HV	PCC3300	IEA - 100	N/A	N/A	UUT-26

Table 2B

Tested Sub-Component Configurations

Sub-Assembly UUT Description	Evaluated Subcomponents	UUT Dimensions			Weight (lbs)	Manufacturer	Related Model(s)	Sds	z/h	Fp/W	OSP-0268 UUT #'s	Test Report UUT #'s	Test report
		Depth (x) (ins)	Width (y) (ins)	Height (z) (ins)									
PC 3.3 genset controller and 2x Schneider P'frame motorized breaker on carbon steel support	PC 3.3 controller Controller enclosure, carbon steel. Support for controller and breaker, carbon steel.	41	48.6	72	650	Cummins	DQCx, DQFAx	1.94	0	1.455	35/A, 35/B	1A, 1/B	D232865
PC 3.3 genset control and SENS battery charger on carbon steel pedestal support	PC 3.3 controller Carbon steel pedestal support (for controller and charger)	32.2	14	65.5	360	Cummins	DFEK/J	1.94	0	1.455	36/A, 36/B	2A, 2/B	D232865

Table 3

UUT-1 Unit Under Test Summary Sheet

Product Type: Power Generator				**Manufacturer: CUMMINS POWER GENERATION**	
Certified Product Construction:	**Tested Configurations:**				**Tested Mounting Descriptions:**
	Mounting Configurations				
	Fuel Tank Options	**External Isolators**	**Internal Isolators**	**Enclosure Options**	
Structural Carbon Steel Skid	None	None	Yes	None	**Genset secured to fixture using (4) 3/4" dia ASTM 325 bolts**

Sub-Component

	Engine	Alternator	Controller	Radiator	Enclosure	Fuel Tank
Manufacturer	**Cummins**	**Cummins**	**Cummins**	**Modine Mfg.**	**N/A**	**N/A**

UUT Properties

Model Number	Lowest Natural Frequency (Hz)			KW	Dimensions (Inches)			Operating Weight(lb.)
	Front-Back	Side to Side	Vertical		Length	Width	Height	
DGHCC	6.22	8.8	17.6	40	83	40	50	1770

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2013	ICC-ES-AC156	2.48	1	1.5	3.97	2.98	1.66	0.67

Equipment layout on table. Genset secured to fixture using (4) 3/4" dia ASTM 325 bolts

Note: 1.The units maintained structural integrity and functionality, after the ICC-ES AC 156 test.
Note: 2. Units and sub-components were full of contents, where applicable.

Table 4

UUT-2 Unit Under Test Summary Sheet

Product Type: Power Generator

Manufacturer: CUMMINS POWER GENERATION

Certified Product Construction:	Tested Configurations:				Tested Mounting Descriptions:
	Mounting Configurations				
	Fuel Tank Options	External Isolators	Internal Isolators	Enclosure Options	
Structural Carbon Steel Skid	None	Yes	Yes	None	Genset secured to fixture using (4) CalDyn RJJEQ A E1000 spring isolators.

Sub-Component

	Engine	Alternator	Controller	Radiator	Enclosure	Fuel Tank
Manufacturer	Cummins	Cummins	Cummins	Modine Mfg.	N/A	N/A

UUT Properties

Model Number	Lowest Natural Frequency (Hz)			KW	Dimensions (Inches)			Operating Weight(lb.)
	Front-Back	Side to Side	Vertical		Length	Width	Height	
DGHCC	7.84	6.98	19.8	40	83	40	55	1783

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2013	ICC-ES-AC156	2.48	1	1.5	3.97	2.98	1.66	0.67

Equipment layout on table. Genset secured to fixture using (4) CalDyn RJJEQ A E1000 spring isolators.

Note: 1.The units maintained structural integrity and functionality, after the ICC-ES AC 156 test.
Note: 2. Units and sub-components were full of contents, where applicable.

Table 5

UUT-3/UUT-3A Unit Under Test Summary Sheet

Product Type: Power Generator

Manufacturer: CUMMINS POWER GENERATION

Certified Product Construction:	Tested Configurations:				Tested Mounting Descriptions:
	Mounting Configurations				
	Fuel Tank Options	External Isolators	Internal Isolators	Enclosure Options	
Structural Carbon Steel Skid	UL142	None	Yes	None	Sub-base tank secured to fixture using (4) 3/4" dia ASTM 325 bolts

Sub-Component

	Engine	Alternator	Controller	Radiator	Enclosure	Fuel Tank
Manufacturer	Cummins	Cummins	Cummins	Modine Mfg.	N/A	UAI (United Alloy Inc)

UUT Properties

Model Number	Lowest Natural Frequency (Hz)			KW	Dimensions (Inches)			Operating Weight(lb.)
	Front-Back	Side to Side	Vertical		Length	Width	Height	
DGHCC (Empty)	15.7	14.0	24.9	40	83	40	73	2522
DGHCC (Full)	7.84	5.5	13.97	40	83	40	73	3756

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2013	ICC-ES-AC156	2.48	1	1.5	3.97	2.98	1.66	0.67

Equipment layout on table. Sub-base tank secured to fixture using (4) 3/4" dia ASTM 325 bolts.

Note: 1.The units maintained structural integrity and functionality, after the ICC-ES AC 156 test.
Note: 2. Units and sub-components were full of contents, where applicable.

Table 6

UUT-4/UUT-4A Unit Under Test Summary Sheet

Product Type: Power Generator

Manufacturer: CUMMINS POWER GENERATION

Certified Product Construction:	Tested Configurations:				Tested Mounting Descriptions:
	Mounting Configurations				
	Fuel Tank Options	External Isolators	Internal Isolators	Enclosure Options	
Structural Carbon Steel Skid	UL142	Yes	Yes	None	Genset attached to a subbase tank via (4) Caldyn RJJEQ AE1000 spring isolators. Sub-base tank secured to fixture using (4) 3/4" dia ASTM 325 bolts

Sub-Component

	Engine	Alternator	Controller	Radiator	Enclosure	Fuel Tank
Manufacturer	Cummins	Cummins	Cummins	Modine Mfg.	N/A	UAI (United Alloy Inc)

UUT Properties

Model Number	Lowest Natural Frequency (Hz)			KW	Dimensions (Inches)			Operating Weight(lb.)
	Front-Back	Side to Side	Vertical		Length	Width	Height	
DGHCC (Empty)	12.45	8.80	15.68	40	83	40	66	2283
DGHCC (Full)	12.44	3.11	15.68	40	83	40	66	2750

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2013	ICC-ES-AC156	2.48	1	1.5	3.97	2.98	1.66	0.67

Equipment layout on table. Genset attached to a sub-base tank via (4) Caldyn RJJEQ AE1000 spring isolators. Sub-base tank secured to fixture using (4) 3/4" dia ASTM 325 bolts.

Note: 1.The units maintained structural integrity and functionality, after the ICC-ES AC 156 test.
Note: 2. Units and sub-components were full of contents, where applicable.

Table 7

UUT-5 Unit Under Test Summary Sheet

Product Type: Power Generator

Manufacturer: CUMMINS POWER GENERATION

Certified Product Construction:	Tested Configurations:				Tested Mounting Descriptions:
	Mounting Configurations				
	Fuel Tank Options	External Isolators	Internal Isolators	Enclosure Options	
Structural Carbon Steel Skid and Carbon Steel Sheet Metal Enclosure	None	None	Yes	Yes	Genset secured to fixture using (4) 3/4" dia ASTM 325 bolts

Sub-Component

	Engine	Alternator	Controller	Radiator	Enclosure	Fuel Tank
Manufacturer	Cummins	Cummins	Cummins	Modine Mfg.	Cummins - Sentinel	N/A

UUT Properties

Model Number	Lowest Natural Frequency (Hz)			KW	Dimensions (Inches)			Operating Weight(lb.)
	Front-Back	Side to Side	Vertical		Length	Width	Height	
DGHCC	6.98	9.88	17.60	40	102	41	77	2570

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2013	ICC-ES-AC156	2.48	1	1.5	3.97	2.98	1.66	0.67

Equipment layout on table. Genset secured to fixture using (4) 3/4" dia ASTM 325 bolts.

Note: 1.The units maintained structural integrity and functionality, after the ICC-ES AC 156 test.
Note: 2. Units and sub-components were full of contents, where applicable.

Table 8

UUT-6/UUT-6A Unit Under Test Summary Sheet

Product Type: Power Generator

Manufacturer: CUMMINS POWER GENERATION

Certified Product Construction:	Tested Configurations:				Tested Mounting Descriptions:
	Mounting Configurations				
	Fuel Tank Options	External Isolators	Internal Isolators	Enclosure Options	
Structural Carbon Steel Skid and Carbon Steel Sheet Metal Enclosure	UL142	None	Yes	Yes	Sub-base tank secured to fixture using (4) 3/4" dia ASTM 325 bolts.

Sub-Component

	Engine	Alternator	Controller	Radiator	Enclosure	Fuel Tank
Manufacturer	Cummins	Cummins	Cummins	Modine Mfg.	Cummins - Sentinel	UAI (United Alloy Inc)

UUT Properties

Model Number	Lowest Natural Frequency (Hz)			KW	Dimensions (Inches)			Operating Weight(lb.)
	Front-Back	Side to Side	Vertical		Length	Width	Height	
DGHCC (Empty)	11.09	6.22	17.6	40	102	41	88	3070
DGHCC (Full)	6.98	5.54	12.44	40	102	41	88	3537

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2013	ICC-ES-AC156	2.48	1	1.5	3.97	2.98	1.66	0.67

Equipment layout on table. Sub-base tank secured to fixture using (4) 3/4" dia ASTM 325 bolts.

Note: 1.The units maintained structural integrity and functionality, after the ICC-ES AC 156 test.
Note: 2. Units and sub-components were full of contents, where applicable.

Table 9

UUT-7 Unit Under Test Summary Sheet

Product Type: Power Generator

Manufacturer: CUMMINS POWER GENERATION

Certified Product Construction:	Tested Configurations:				Tested Mounting Descriptions:
	Mounting Configurations				
	Fuel Tank Options	External Isolators	Internal Isolators	Enclosure Options	
Structural Carbon Steel Skid	None	Yes	None	None	Genset secured to fixture using (4) CalDyn RJJEQ A E1000 spring isolators.

Sub-Component

	Engine	Alternator	Controller	Radiator	Enclosure	Fuel Tank
Manufacturer	Cummins	Cummins	Cummins	Modine Mfg.	N/A	N/A

UUT Properties

Model Number	Lowest Natural Frequency (Hz)			KW	Dimensions (Inches)			Operating Weight(lb.)
	Front-Back	Side to Side	Vertical		Length	Width	Height	
DGHCC	15.68	6.98	17.60	40	83	40	55	1783

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2013	ICC-ES-AC156	2.48	1	1.5	3.97	2.98	1.66	0.67

Equipment layout on table. Genset secured to fixture using (4) CalDyn RJJEQ A E1000 spring isolators.

Note: 1.The units maintained structural integrity and functionality, after the ICC-ES AC 156 test.
Note: 2. Units and sub-components were full of contents, where applicable.

Table 10

UUT-8/UUT-8A Unit Under Test Summary Sheet

Product Type: Power Generator

Manufacturer: CUMMINS POWER GENERATION

Certified Product Construction:	Tested Configurations:				Tested Mounting Descriptions:
	Mounting Configurations				
	Fuel Tank Options	External Isolators	Internal Isolators	Enclosure Options	
Structural Carbon Steel Skid	UL142	Yes	None	None	Genset attached to a sub-base tank via (4) Caldyn RJJEQ AE1000 spring isolators. Sub-base tank secured to fixture using (4) 3/4" dia ASTM 325 bolts.

Sub-Component

	Engine	Alternator	Controller	Radiator	Enclosure	Fuel Tank
Manufacturer	Cummins	Cummins	Cummins	Modine Mfg.	N/A	UAI (United Alloy Inc)

UUT Properties

Model Number	Lowest Natural Frequency (Hz)			KW	Dimensions (Inches)			Operating Weight(lb.)
	Front-Back	Side to Side	Vertical		Length	Width	Height	
DGHCC (Empty)	7.84	7.84	19.85	40	83	40	66	2283
DGHCC (Full)	12.45	3.11	15.68	40	83	40	66	2750

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2013	ICC-ES-AC156	2.48	1	1.5	3.97	2.98	1.66	0.67

Equipment layout on table. Genset attached to a sub-base tank via (4) Caldyn RJJEQ AE1000 spring isolators. Sub-base tank secured to fixture using (4) 3/4" dia ASTM 325 bolts.

Note: 1.The units maintained structural integrity and functionality, after the ICC-ES AC 156 test.
Note: 2. Units and sub-components were full of contents, where applicable.

Table 11

UUT-9/UUT-9A Unit Under Test Summary Sheet

Product Type: Power Generator

Manufacturer: CUMMINS POWER GENERATION

Certified Product Construction:	Tested Configurations:				Tested Mounting Descriptions:
	Mounting Configurations				
	Fuel Tank Options	External Isolators	Internal Isolators	Enclosure Options	
Structural Carbon Steel Skid	UL142	None	Yes	None	Sub-base tank secured to fixture using (4) 3/4" dia ASTM 325 bolts.

Sub-Component

	Engine	Alternator	Controller	Radiator	Enclosure	Fuel Tank
Manufacturer	Cummins	Cummins	Cummins	Denso Marston	N/A	UAI (United Alloy Inc)

UUT Properties

Model Number	Lowest Natural Frequency (Hz)			KW	Dimensions (Inches)			Operating Weight(lb.)
	Front-Back	Side to Side	Vertical		Length	Width	Height	
DSGAA (Empty)	19.76	24.89	17.60	100	119	44	93	4707
DSGAA (Full)	19.76	24.89	17.60	100	119	44	93	6897

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2013	ICC-ES-AC156	2.10	1	1.5	3.36	2.52	1.41	0.57

Equipment layout on table. Sub-base tank secured to fixture using (4) 3/4" dia ASTM 325 bolts.

Note: 1.The units maintained structural integrity and functionality, after the ICC-ES AC 156 test.
Note: 2. Units and sub-components were full of contents, where applicable.

Table 12

UUT-10 Unit Under Test Summary Sheet

Product Type: Power Generator

Manufacturer: CUMMINS POWER GENERATION

Certified Product Construction:	Tested Configurations:				Tested Mounting Descriptions:
	Mounting Configurations				
	Fuel Tank Options	External Isolators	Internal Isolators	Enclosure Options	
Structural Carbon Steel Skid and Carbon Steel Sheet Metal Enclosure	No	Yes	Yes	Yes	Genset attached to enclosure base via (4) EBCO 4990-70 duro elastomer isolators. Enclosure base secured to fixture using (8) 3/4" dia ASTM 325 bolts.

Sub-Component

	Engine	Alternator	Controller	Radiator	Enclosure	Fuel Tank
Manufacturer	Cummins	Cummins	Cummins	Enterex	Cummins - Thor-I	N/A

UUT Properties

Model Number	Lowest Natural Frequency (Hz)			KW	Dimensions (Inches)			Operating Weight(lb.)
	Front-Back	Side to Side	Vertical		Length	Width	Height	
DQHAA	4.40	11.08	12.45	275	170	80	100	10,392

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2013	ICC-ES-AC156	2.28	1	1.5	3.65	2.74	1.53	0.62

Equipment layout on table. Genset attached to enclosure base via (4) EBCO 4990-70 duro elastomer isolators. Enclosure base secured to fixture using (8) 3/4" dia ASTM 325 bolts.

Note: 1.The units maintained structural integrity and functionality, after the ICC-ES AC 156 test.
Note: 2. Units and sub-components were full of contents, where applicable.

Table 13

UUT-11/UUT-11A Unit Under Test Summary Sheet

Product Type: Power Generator

Manufacturer: CUMMINS POWER GENERATION

Certified Product Construction:	Tested Configurations:				Tested Mounting Descriptions:
	Mounting Configurations				
	Fuel Tank Options	External Isolators	Internal Isolators	Enclosure Options	
Structural Carbon Steel Skid and Carbon Steel Sheet Metal Enclosure	UL142	Yes	Yes	Yes	Genset attached to sub-base tank via (4) EBCO 4990-70 duro elastomer isolators. Sub-base tank secured to fixture using (12) 3/4" dia ASTM 325 bolts.

Sub-Component

	Engine	Alternator	Controller	Radiator	Enclosure	Fuel Tank
Manufacturer	Cummins	Cummins	Cummins	Enterex	Cummins - Thor-I	Tramont

UUT Properties

Model Number	Lowest Natural Frequency (Hz)			KW	Dimensions (Inches)			Operating Weight(lb.)
	Front-Back	Side to Side	Vertical		Length	Width	Height	
DQHAA (Empty)	6.22	6.22	17.60	275	170	80	118	14,270
DQHAA (Full)	8.8	11.09	12.44	275	170	80	118	19,941

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2013	ICC-ES-AC156	2.28	1	1.5	3.65	2.74	1.53	0.62

Equipment layout on table. Genset attached to sub-base tank via (4) EBCO 4990-70 duro elastomer isolators. Sub-base tank secured to fixture using (12) 3/4" dia ASTM 325 bolts.

Note: 1.The units maintained structural integrity and functionality, after the ICC-ES AC 156 test.
Note: 2. Units and sub-components were full of contents, where applicable.

Table 14

UUT-12/UUT-12A Unit Under Test Summary Sheet

Product Type: Power Generator

Manufacturer: CUMMINS POWER GENERATION

Certified Product Construction:	Tested Configurations:				Tested Mounting Descriptions:
	Mounting Configurations				
	Fuel Tank Options	External Isolators	Internal Isolators	Enclosure Options	
Structural Carbon Steel Skid and Carbon Steel Sheet Metal Enclosure	UL142	Yes	Yes	Yes	Genset attached to enclosure base via (10) VMC M2SSH-1E-3400N spring isolators. Sub-base tank secured to fixture using (12) 3/4" dia SAE Grade 8 bolts.

Sub-Component

	Engine	Alternator	Controller	Radiator	Enclosure	Fuel Tank
Manufacturer	Cummins	Cummins	Cummins	Bearward	Cummins - Thor-II	UAI (United Alloy Inc)

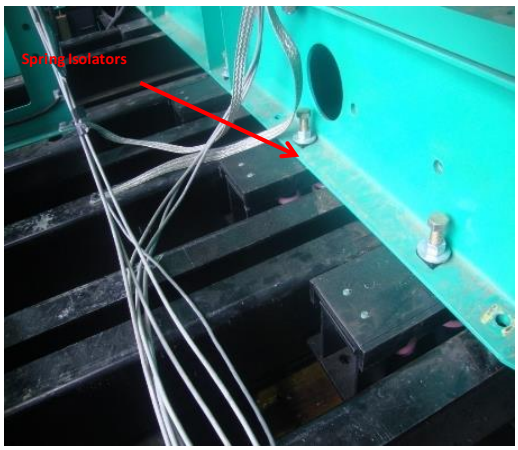
UUT Properties

Model Number	Lowest Natural Frequency (Hz)			KW	Dimensions (Inches)			Operating Weight(lb.)
	Front-Back	Side to Side	Vertical		Length	Width	Height	
DQFAD (Empty)	3.11	8.8	19.76	1000	338	102	137	33259
DQFAD (Full)	2.47	6.99	19.76	1000	338	102	137	37662

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2013	ICC-ES-AC156	1.94	0	1.5	1.94	0.78	1.30	0.52

Equipment layout on table. Sub-base tank secured to fixture using (12) 3/4" dia SAE Grade 8 bolts.



Genset attached to enclosure base via (10) VMC M2SSH-1E-3400N spring isolators.

Note: 1.The units maintained structural integrity and functionality, after the ICC-ES AC 156 test.
Note: 2. Units and sub-components were full of contents, where applicable.

Table 15

UUT-13 Unit Under Test Summary Sheet

Product Type: Power Generator

Manufacturer: CUMMINS POWER GENERATION

Certified Product Construction:	Tested Configurations:				Tested Mounting Descriptions:
	Mounting Configurations				
	Fuel Tank Options	External Isolators	Internal Isolators	Enclosure Options	
Structural Carbon Steel Skid and Carbon Steel Sheet Metal Enclosure	None	Yes	None	Yes	Genset attached to enclosure base via (10) VMC M2SSH-1E-3400N spring isolators. Enclosure base secured to fixture using (12) 3/4" dia SAE Grade 8 bolts.

Sub-Component

	Engine	Alternator	Controller	Radiator	Enclosure	Fuel Tank
Manufacturer	Cummins	Cummins	Cummins	Bearward	Cummins - Thor-II	N/A

UUT Properties

Model Number	Lowest Natural Frequency (Hz)			KW	Dimensions (Inches)			Operating Weight(lb.)
	Front-Back	Side to Side	Vertical		Length	Width	Height	
DQFAD	5.54	8.80	13.97	1000	315	102	119	29794

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2013	ICC-ES-AC156	1.94	0	1.5	1.94	0.78	1.30	0.52

Equipment layout on table. Genset attached to enclosure base via (10) VMC M2SSH-1E-3400N spring isolators. Enclosure base secured to fixture using (12) 3/4" dia SAE Grade 8 bolts.

Note: 1.The units maintained structural integrity and functionality, after the ICC-ES AC 156 test.
Note: 2. Units and sub-components were full of contents, where applicable.

Table 16

UUT-14 Unit Under Test Summary Sheet

Product Type: Power Generator					Manufacturer: CUMMINS POWER GENERATION
Certified Product Construction:	**Tested Configurations:**				**Tested Mounting Descriptions:**
	Mounting Configurations				
	Fuel Tank Options	External Isolators	Internal Isolators	Enclosure Options	
Structural Carbon Steel Skid	None	Yes	None	None	**Genset secured to the fixture via (12) VMC M2SSH-1E spring isolators.**

Sub-Component

	Engine	Alternator	Controller	Radiator	Enclosure	Fuel Tank
Manufacturer	**Cummins**	**Cummins**	**Cummins**	**Bearward**	**N/A**	**N/A**

UUT Properties

Model Number	Lowest Natural Frequency (Hz)			KW	Dimensions (Inches)			Operating Weight(lb.)
	Front-Back	Side to Side	Vertical		Length	Width	Height	
DQKAB	8.90	8.09	4.09	2000	244	100	120	35846

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2013	ICC-ES-AC156	1.94	0	1.5	1.94	0.78	1.30	0.52

Equipment layout on table. Genset secured to the fixture via (12) VMC M2SSH-1E spring isolators.

Note: 1.The units maintained structural integrity and functionality, after the ICC-ES AC 156 test.
Note: 2. Units and sub-components were full of contents, where applicable.

Table 17

UUT-15/UUT-15A Unit Under Test Summary Sheet

Product Type: Power Generator

Manufacturer: CUMMINS POWER GENERATION

Certified Product Construction:	Tested Configurations:				Tested Mounting Descriptions:
	Mounting Configurations				
	Fuel Tank Options	External Isolators	Internal Isolators	Enclosure Options	
Structural Carbon Steel Skid	UL2085	Yes	None	None	Genset attached to a sub-base tank via (12) VMC M2SSH-1E spring isolators.

Sub-Component

	Engine	Alternator	Controller	Radiator	Enclosure	Fuel Tank
Manufacturer	Cummins	Cummins	Cummins	Bearward	N/A	IBI

UUT Properties

Model Number	Lowest Natural Frequency (Hz)			KW	Dimensions (Inches)			Operating Weight(lb.)
	Front-Back	Side to Side	Vertical		Length	Width	Height	
DQKAB (Empty)	8.90	8.09	4.09	2000	244	100	152	57848
DQKAB (Full)	8.90	8.09	4.09	2000	244	100	152	62592

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2013	ICC-ES-AC156	1.94	0	1.5	1.94	0.78	1.30	0.52

Equipment layout on table. Attached to a sub-base tank via (12) VMC M2SSH-1E spring isolators.

Note: 1.The units maintained structural integrity and functionality, after the ICC-ES AC 156 test.
Note: 2. Units and sub-components were full of contents, where applicable.

Table 18

UUT-16 Unit Under Test Summary Sheet

Product Type: Power Generator

Manufacturer: CUMMINS POWER GENERATION

Certified Product Construction:	Tested Configurations:				Tested Mounting Descriptions:
	Mounting Configurations				
	Fuel Tank Options	External Isolators	Internal Isolators	Enclosure Options	
Structural Carbon Steel Skid	None	None	Yes	None	Genset secured to the fixture using (12) 3/4" dia ASTM 325 bolts.

Sub-Component

	Engine	Alternator	Controller	Radiator	Enclosure	Fuel Tank
Manufacturer	Cummins	Cummins	Cummins	Modine Mfg.	N/A	N/A

UUT Properties

Model Number	Lowest Natural Frequency (Hz)			KW	Dimensions (Inches)			Operating Weight(lb.)
	Front-Back	Side to Side	Vertical		Length	Width	Height	
DQKAF	6.22	6.22	22.17	2250	275	98	161	43805

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2013	ICC-ES-AC156	2.10	1	1.5	3.36	2.52	1.41	0.57

Equipment layout on table. Genset secured to the fixture using (12) 3/4" dia ASTM 325 bolts.

Note: 1.The units maintained structural integrity and functionality, after the ICC-ES AC 156 test.
Note: 2. Units and sub-components were full of contents, where applicable.

Table 19

UUT-17 Unit Under Test Summary Sheet

Product Type: Power Generator

Manufacturer: CUMMINS POWER GENERATION

Certified Product Construction:	Tested Configurations:				Tested Mounting Descriptions:
	Mounting Configurations				
	Fuel Tank Options	External Isolators	Internal Isolators	Enclosure Options	
Structural Carbon Steel Skid	None	Yes	Yes	None	Genset secured to the fixture via (16) CalDyn RJJEQ-D-5880 spring isolators.

Sub-Component

	Engine	Alternator	Controller	Radiator	Enclosure	Fuel Tank
Manufacturer	Cummins	Cummins	Cummins	Modine Mfg.	N/A	N/A

UUT Properties

Model Number	Lowest Natural Frequency (Hz)			KW	Dimensions (Inches)			Operating Weight(lb.)
	Front-Back	Side to Side	Vertical		Length	Width	Height	
DQKAF	4.94	2.47	3.92	2250	275	98	167	44405

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2013	ICC-ES-AC156	1.94	1	1.5	3.10	2.33	1.30	0.52

Equipment layout on table. Genset secured to the fixture via (16) CalDyn RJJEQ-D-5880 spring isolators.

Note: 1.The units maintained structural integrity and functionality, after the ICC-ES AC 156 test.
Note: 2. Units and sub-components were full of contents, where applicable.

Table 20

UUT-18/UUT-18A Unit Under Test Summary Sheet

Product Type: Power Generator

Manufacturer: CUMMINS POWER GENERATION

Certified Product Construction:	Tested Configurations:				Tested Mounting Descriptions:
	Mounting Configurations				
	Fuel Tank Options	External Isolators	Internal Isolators	Enclosure Options	
Structural Carbon Steel Skid	UL2085	None	Yes	None	Genset secured to a sub-base tank using (12) 3/4"dia ASTM 325 bolts. Sub-base tank secured to the fixture using (32) 3/4" dia ASTM 325 bolts.

Sub-Component

	Engine	Alternator	Controller	Radiator	Enclosure	Fuel Tank
Manufacturer	Cummins	Cummins	Cummins	Modine Mfg.	N/A	IBI

UUT Properties

Model Number	Lowest Natural Frequency (Hz)			KW	Dimensions (Inches)			Operating Weight(lb.)
	Front-Back	Side to Side	Vertical		Length	Width	Height	
DQKAF (Empty)	5.54	5.54	11.09	2250	275	98	185	65895
DQKAF (Full)	5.54	6.22	11.09	2250	275	98	185	70639

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2013	ICC-ES-AC156	2.10	0	1.5	2.10	0.84	1.41	0.57

Equipment layout on table. Genset secured to a sub-base tank using (12) 3/4"dia ASTM 325 bolts. Sub-base tank secured to the fixture using (32) 3/4" dia ASTM 325 bolts.

Note: 1.The units maintained structural integrity and functionality, after the ICC-ES AC 156 test.
Note: 2. Units and sub-components were full of contents, where applicable.

Table 21

UUT-19/UUT-19A Unit Under Test Summary Sheet

Product Type: Power Generator

Manufacturer: CUMMINS POWER GENERATION

Certified Product Construction:	Tested Configurations:				Tested Mounting Descriptions:
	Mounting Configurations				
	Fuel Tank Options	External Isolators	Internal Isolators	Enclosure Options	
Structural Carbon Steel Skid	UL2085	Yes	Yes	None	Genset secured to a sub-base tank via (12) VMC M2SSH-1E spring isolators.

Sub-Component

	Engine	Alternator	Controller	Radiator	Enclosure	Fuel Tank
Manufacturer	Cummins	Cummins	Cummins	Modine Mfg.	N/A	IBI

UUT Properties

Model Number	Lowest Natural Frequency (Hz)			KW	Dimensions (Inches)			Operating Weight(lb.)
	Front-Back	Side to Side	Vertical		Length	Width	Height	
DQKAF (Empty)	4.94	2.77	4.4	2250	275	98	191	66495
DQKAF (Full)	5.54	2.47	12.45	2250	275	98	191	71239

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2013	ICC-ES-AC156	2.10	0	1.5	2.10	0.84	1.41	0.57

Equipment layout on table. Genset secured to a sub-base tank via (12) VMC M2SSH-1E spring isolators.

Note: 1.The units maintained structural integrity and functionality, after the ICC-ES AC 156 test.
Note: 2. Units and sub-components were full of contents, where applicable.

Table 22

UUT-20/UUT-20A Unit Under Test Summary Sheet

Product Type: Power Generator	Manufacturer: CUMMINS POWER GENERATION	
Certified Product Construction:	**Tested Configurations:**	**Tested Mounting Descriptions:**
Structural Carbon Steel Skid	**Mounting Configurations**	**Genset secured to a sub-base tank via (14) CalDyn RJRD-5880 spring isolators.**

Fuel Tank Options	External Isolators	Internal Isolators	Enclosure Options
UL142	Yes	None	None

Sub-Component

	Engine	Alternator	Controller	Radiator	Enclosure	Fuel Tank
Manufacturer	Cummins	Cummins	Cummins	IEA-43C	N/A	GPC

UUT Properties

Model Number	Lowest Natural Frequency (Hz)			KW	Dimensions (Inches)			Operating Weight(lb.)
	Front-Back	Side to Side	Vertical		Length	Width	Height	
DQLF (Empty) DQLH (Empty)	2.47	2.77	3.92	2750	308	122	159	59385
DQLF (Full) DQLH (Full)	2.20	2.47	3.92	2750	308	122	159	66576

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2013	ICC-ES-AC156	2.10	0	1.5	2.10	0.84	1.41	0.57

Equipment layout on table. Genset secured to a sub-base tank via (14) CalDyn RJRD-5880 spring isolators.

Note: 1.The units maintained structural integrity and functionality, after the ICC-ES AC 156 test.
Note: 2. Units and sub-components were full of contents, where applicable.

Table 23

UUT-21 Unit Under Test Summary Sheet

Product Type: Power Generator	Manufacturer: CUMMINS POWER GENERATION	
Certified Product Construction:	**Tested Configurations:**	**Tested Mounting Descriptions:**
Structural Carbon Steel Skid	**Mounting Configurations**	**Genset secured to the fixture via (14) CalDyn RJRD-5880 spring isolators.**

Fuel Tank Options	External Isolators	Internal Isolators	Enclosure Options
None	Yes	None	None

Sub-Component

	Engine	Alternator	Controller	Radiator	Enclosure	Fuel Tank
Manufacturer	Cummins	Cummins	Cummins	IEA-43C	N/A	N/A

UUT Properties

Model Number	Lowest Natural Frequency (Hz)			KW	Dimensions (Inches)			Operating Weight(lb.)
	Front-Back	Side to Side	Vertical		Length	Width	Height	
DQLF DQLH	2.20	3.11	3.11	2750	282	117	134	52985

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2013	ICC-ES-AC156	2.10	0	1.5	2.10	0.84	1.41	0.57

Equipment layout on table. Genset secured to the fixture via (14) California Dynamics Corporation RJRD-5880 spring isolators.

Note: 1.The units maintained structural integrity and functionality, after the ICC-ES AC 156 test.
Note: 2. Units and sub-components were full of contents, where applicable.

Table 24

UUT-22 Unit Under Test Summary Sheet

Product Type: Power Generator

Manufacturer: CUMMINS POWER GENERATION

Certified Product Construction:	Tested Configurations:				Tested Mounting Descriptions:
	Mounting Configurations				
	Fuel Tank Options	External Isolators	Internal Isolators	Enclosure Options	
Structural Carbon Steel Skid	None	Yes	None	None	Genset secured to the fixture via (18) CalDyn RJRD-5880 spring isolators.

Sub-Component

	Engine	Alternator	Controller	Radiator	Enclosure	Fuel Tank
Manufacturer	Cummins	Cummins	Cummins	IEA-43C	N/A	N/A

UUT Properties

Model Number	Lowest Natural Frequency (Hz)			KW	Dimensions (Inches)			Operating Weight(lb.)
	Front-Back	Side to Side	Vertical		Length	Width	Height	
DQLF DQLH	2.47	3.49	3.49	2750	282	117	134	52985

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2013	ICC-ES-AC156	2.00	1	1.5	3.20	2.40	1.34	0.54

Equipment layout on table. Genset secured to the fixture via (18) CalDyn RJRD-5880 spring isolators.

Note: 1.The units maintained structural integrity and functionality, after the ICC-ES AC 156 test.
Note: 2. Units and sub-components were full of contents, where applicable.

Table 25

UUT-23/UUT-23A Unit Under Test Summary Sheet

Product Type: Power Generator	Manufacturer: CUMMINS POWER GENERATION	
Certified Product Construction:	**Tested Configurations:**	**Tested Mounting Descriptions:**

Structural Carbon Steel Skid	Mounting Configurations				Genset secured to a sub-base tank via (10) VMC M2SSH-1E-6500N spring isolators.
	Fuel Tank Options	External Isolators	Internal Isolators	Enclosure Options	
	UL142	Yes	None	None	

Sub-Component

	Engine	Alternator	Controller	Radiator	Enclosure	Fuel Tank
Manufacturer	Cummins	Cummins	Cummins	N/A	N/A	GPC

UUT Properties

Model Number	Lowest Natural Frequency (Hz)			KW	Dimensions (Inches)			Operating Weight(lb.)
	Front-Back	Side to Side	Vertical		Length	Width	Height	
DQLF (Empty) DQLH (Empty)	1.75	2.47	4.4	2750	308	122	147	51784
DQLF (Full) DQLH (Full)	2.47	3.49	6.22	2750	308	122	147	58976

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2013	ICC-ES-AC156	2.10	0	1.5	2.10	0.84	1.41	0.57

Equipment layout on table. Genset secured to a sub-base tank via (10) VMC M2SSH-1E-6500N spring isolators.

Note: 1.The units maintained structural integrity and functionality, after the ICC-ES AC 156 test.
Note: 2. Units and sub-components were full of contents, where applicable.

Table 26

UUT-24 Unit Under Test Summary Sheet

Product Type: Power Generator	Manufacturer: CUMMINS POWER GENERATION	
Certified Product Construction:	**Tested Configurations:**	**Tested Mounting Descriptions:**
Structural Carbon Steel Skid	**Mounting Configurations**	**Genset secured to the fixture via (14) CalDyn RJRD-5880 spring isolators.**

Fuel Tank Options	External Isolators	Internal Isolators	Enclosure Options
None	Yes	None	None

Sub-Component

	Engine	Alternator	Controller	Radiator	Enclosure	Fuel Tank
Manufacturer	Cummins	Cummins	Cummins	N/A	N/A	N/A

UUT Properties

Model Number	Lowest Natural Frequency (Hz)			KW	Dimensions (Inches)			Operating Weight(lb.)
	Front-Back	Side to Side	Vertical		Length	Width	Height	
DQLF DQLH	1.96	2.77	1.96	2750	220	117	122	45384

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2013	ICC-ES-AC156	2.00	1	1.5	3.20	2.40	1.34	0.54

Equipment layout on table. Genset secured to the fixture via (14) CalDyn RJRD-5880 spring isolators.

Note: 1.The units maintained structural integrity and functionality, after the ICC-ES AC 156 test.
Note: 2. Units and sub-components were full of contents, where applicable.

Table 27

UUT-25/UUT-25A Unit Under Test Summary Sheet

Product Type: Power Generator

Manufacturer: CUMMINS POWER GENERATION

Certified Product Construction:	Tested Configurations:				Tested Mounting Descriptions:
	Mounting Configurations				
	Fuel Tank Options	External Isolators	Internal Isolators	Enclosure Options	
Structural Carbon Steel Skid	UL142	Yes	None	None	Genset secured to a sub-base tank via (14) VMC M2SSH-1E-6500N spring isolators.

Sub-Component

	Engine	Alternator	Controller	Radiator	Enclosure	Fuel Tank
Manufacturer	Cummins	Cummins	Cummins	IEA-50C	N/A	GPC

UUT Properties

Model Number	Lowest Natural Frequency (Hz)			KW	Dimensions (Inches)			Operating Weight(lb.)
	Front-Back	Side to Side	Vertical		Length	Width	Height	
DQLF (Empty) DQLH (Empty)	2.2	2.47	2.2	2750	308	125	178	63568
DQLF (Full) DQLH (Full)	2.2	2.47	4.94	2750	308	125	178	70760

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2013	ICC-ES-AC156	2.10	0	1.5	2.10	0.84	1.41	0.57

Equipment layout on table. Genset secured to a sub-base tank via (14) VMC M2SSH-1E-6500N spring isolators.

Note: 1.The units maintained structural integrity and functionality, after the ICC-ES AC 156 test.
Note: 2. Units and sub-components were full of contents, where applicable.

Table 28

UUT-26 Unit Under Test Summary Sheet

Product Type: Power Generator	Manufacturer: CUMMINS POWER GENERATION	
Certified Product Construction:	**Tested Configurations:**	**Tested Mounting Descriptions:**
Structural Carbon Steel Skid	**Mounting Configurations**	**Genset secured to the fixture via (18) CalDyn RJRD-5880 spring isolators.**

Fuel Tank Options	External Isolators	Internal Isolators	Enclosure Options
None	Yes	None	None

Sub-Component

	Engine	Alternator	Controller	Radiator	Enclosure	Fuel Tank
Manufacturer	Cummins	Cummins	Cummins	IEA-50C	N/A	N/A

UUT Properties

Model Number	Lowest Natural Frequency (Hz)			KW	Dimensions (Inches)			Operating Weight(lb.)
	Front-Back	Side to Side	Vertical		Length	Width	Height	
DQLF DQLH	2.47	2.77	5.54	2750	292	125	153	57168

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2013	ICC-ES-AC156	2.00	1	1.5	3.20	2.40	1.34	0.54

Equipment layout on table. Genset secured to the fixture via (18) CalDyn RJRD-5880 spring isolators.

Note: 1.The units maintained structural integrity and functionality, after the ICC-ES AC 156 test.
Note: 2. Units and sub-components were full of contents, where applicable.

Table 29

UUT-27 Unit Under Test Summary Sheet

Product Type: Power Generator

Manufacturer: CUMMINS POWER GENERATION

Certified Product Construction:	Tested Configurations:				Tested Mounting Descriptions:
	Mounting Configurations				
	Fuel Tank Options	External Isolators	Internal Isolators	Enclosure Options	
Structural Carbon Steel Skid	None	None	Yes	None	Sub-base tank secured to the fixture using (4) 3/4" dia ASTM 325 bolts.

Sub-Component

	Engine	Alternator	Controller	Radiator	Enclosure	Fuel Tank
Manufacturer	Cummins	Cummins	Cummins	Denso Marston	N/A	N/A

UUT Properties

Model Number	Lowest Natural Frequency (Hz)			KW	Dimensions (Inches)			Operating Weight(lb.)
	Front-Back	Side to Side	Vertical		Length	Width	Height	
DSGAA	4.40	5.54	11.09	100	118	44	66	3209

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2013	ICC-ES-AC156	2.48	0	1.5	2.48	0.99	1.66	0.67
CBC 2013	ICC-ES-AC156	2.00	1	1.5	3.20	2.40	1.34	0.54

Equipment layout on table. Sub-base tank secured to the fixture using (4) 3/4" dia ASTM 325 bolts.

Note: 1.The units maintained structural integrity and functionality, after the ICC-ES AC 156 test.

Table 30

UUT-28/UUT-28A Unit Under Test Summary Sheet

Product Type: Power Generator

Manufacturer: CUMMINS POWER GENERATION

Certified Product Construction:	Tested Configurations:				Tested Mounting Descriptions:
	Mounting Configurations				
	Fuel Tank Options	External Isolators	Internal Isolators	Enclosure Options	
Structural Carbon Steel Skid	UL142	None	Yes	Yes	Genset secured to a sub-base tank using (4) 3/4" dia ASTM 325 bolts.

Sub-Component

	Engine	Alternator	Controller	Radiator	Enclosure	Fuel Tank
Manufacturer	Cummins	Cummins	Cummins	Denso Marston	Cummins	UAI (United Alloy Inc)

UUT Properties

Model Number	Lowest Natural Frequency (Hz)			KW	Dimensions (Inches)			Operating Weight(lb.)
	Front-Back	Side to Side	Vertical		Length	Width	Height	
DSGAA (Empty)	4.94	6.22	12.45	100	172	44	108	6557
DSGAA (Full)	4.94	5.54	9.88	100	172	44	108	9595

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2013	ICC-ES-AC156	2.48	0	1.5	2.48	0.99	1.66	0.67
CBC 2013	ICC-ES-AC156	2.00	1	1.5	3.20	2.40	1.34	0.54

Equipment layout on table. Genset secured to a sub-base tank using (4) 3/4" dia ASTM 325 bolts.

Note: 1.The units maintained structural integrity and functionality, after the ICC-ES AC 156 test.
2. Units were full of content during tests.

Table 31

UUT-29 Unit Under Test Summary Sheet

Product Type: Power Generator

Manufacturer: CUMMINS POWER GENERATION

Certified Product Construction:	Tested Configurations:				Tested Mounting Descriptions:
	Mounting Configurations				
	Fuel Tank Options	External Isolators	Internal Isolators	Enclosure Options	
Structural Carbon Steel Skid	None	None	Yes	Yes	Genset secured to the fixture using (4) 3/4" dia ASTM 325 bolts.

Sub-Component

	Engine	Alternator	Controller	Radiator	Enclosure	Fuel Tank
Manufacturer	Cummins	Cummins	Cummins	Denso Marston	Cummins	N/A

UUT Properties

Model Number	Lowest Natural Frequency (Hz)			KW	Dimensions (Inches)			Operating Weight(lb.)
	Front-Back	Side to Side	Vertical		Length	Width	Height	
DSGAA	4.94	9.88	11.09	100	168	44	84	5083

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2013	ICC-ES-AC156	2.48	0	1.5	2.48	0.99	1.66	0.67
CBC 2013	ICC-ES-AC156	2.00	1	1.5	3.20	2.40	1.34	0.54

Equipment layout on table. Genset secured to the fixture using (4) 3/4" dia ASTM 325 bolts.

Note: 1.The units maintained structural integrity and functionality, after the ICC-ES AC 156 test.

Table 32

UUT-30 Unit Under Test Summary Sheet

Product Type: Power Generator

Manufacturer: CUMMINS POWER GENERATION

Certified Product Construction:	Tested Configurations:				Tested Mounting Descriptions:
	Mounting Configurations				
	Fuel Tank Options	External Isolators	Internal Isolators	Enclosure Options	
Structural Carbon Steel Skid	None	None	Yes	None	Genset secured to the fixture using (4) 3/4" dia ASTM 325 bolts.

Sub-Component

	Engine	Alternator	Controller	Radiator	Enclosure	Fuel Tank
Manufacturer	Cummins	Cummins	Cummins	Bearward	N/A	N/A

UUT Properties

Model Number	Lowest Natural Frequency (Hz)			KW	Dimensions (Inches)			Operating Weight(lb.)
	Front-Back	Side to Side	Vertical		Length	Width	Height	
DQDAC	3.49	6.22	11.09	300	119	50	66	5113

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2013	ICC-ES-AC156	2.48	0	1.5	2.48	0.99	1.66	0.67
CBC 2013	ICC-ES-AC156	2.00	1	1.5	3.20	2.40	1.34	0.54

Equipment layout on table. Genset secured to the fixture using (4) 3/4" dia ASTM 325 bolts.

Note: 1.The units maintained structural integrity and functionality, after the ICC-ES AC 156 test.

Table 33

UUT-31/UUT-31A Unit Under Test Summary Sheet

Product Type: Power Generator

Manufacturer: CUMMINS POWER GENERATION

Certified Product Construction:	Tested Configurations:				Tested Mounting Descriptions:
	Mounting Configurations				
	Fuel Tank Options	External Isolators	Internal Isolators	Enclosure Options	
Structural Carbon Steel Skid	UL142	Yes	Yes	None	Genset secured to a sub-base tank via (4) EBCO 4990-60 duro elastomer isolators.

Sub-Component

	Engine	Alternator	Controller	Radiator	Enclosure	Fuel Tank
Manufacturer	Cummins	Cummins	Cummins	Bearward	N/A	Tramont

UUT Properties

Model Number	Lowest Natural Frequency (Hz)			KW	Dimensions (Inches)			Operating Weight(lb.)
	Front-Back	Side to Side	Vertical		Length	Width	Height	
DQDAC (Empty)	3.11	4.40	6.98	300	222	90	116	11769
DQDAC (Full)	3.11	4.40	7.84	300	222	90	116	20790

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2013	ICC-ES-AC156	2.48	0	1.5	2.48	0.99	1.66	0.67
CBC 2013	ICC-ES-AC156	2.00	1	1.5	3.20	2.40	1.34	0.54

Equipment layout on table. Genset secured to a sub-base tank via (4) EBCO 4990-60 duro elastomer isolators.

Note: 1.The units maintained structural integrity and functionality, after the ICC-ES AC 156 test.
2. Units were full of content during tests.

Table 34

UUT-32 Unit Under Test Summary Sheet

Product Type: Power Generator

Manufacturer: CUMMINS POWER GENERATION

Certified Product Construction:	Tested Configurations:				Tested Mounting Descriptions:
	Mounting Configurations				
	Fuel Tank Options	External Isolators	Internal Isolators	Enclosure Options	
Structural Carbon Steel Skid	None	Yes	Yes	Yes	Genset secured to enclosure base via (4) EBCO 4990-60 duro elastomer isolators. Enclosure base secured to the fixture using (4) 3/4" dia ASTM 325 bolts.

Sub-Component

	Engine	Alternator	Controller	Radiator	Enclosure	Fuel Tank
Manufacturer	Cummins	Cummins	Cummins	Bearward	Cummins	N/A

UUT Properties

Model Number	Lowest Natural Frequency (Hz)			KW	Dimensions (Inches)			Operating Weight(lb.)
	Front-Back	Side to Side	Vertical		Length	Width	Height	
DQDAC	5.54	4.40	6.98	300	233	90	100	13039

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2013	ICC-ES-AC156	2.48	0	1.5	2.48	0.99	1.66	0.67
CBC 2013	ICC-ES-AC156	2.00	1	1.5	3.20	2.40	1.34	0.54

Equipment layout on table. Genset secured to enclosure base via (4) EBCO 4990-60 duro elastomer isolators. Enclosure base secured to the fixture using (4) 3/4" dia ASTM 325 bolts.

Note: 1.The units maintained structural integrity and functionality, after the ICC-ES AC 156 test.

Table 35

UUT-33/UUT-33A Unit Under Test Summary Sheet

Product Type: Power Generator

Manufacturer: CUMMINS POWER GENERATION

Certified Product Construction:	Tested Configurations:				Tested Mounting Descriptions:
	Mounting Configurations				
	Fuel Tank Options	External Isolators	Internal Isolators	Enclosure Options	
Structural Carbon Steel Skid	UL142	Yes	Yes	Yes	Genset secured to a sub-base tank via (4) EBCO 4990-60 duro elastomer isolators.

Sub-Component

	Engine	Alternator	Controller	Radiator	Enclosure	Fuel Tank
Manufacturer	Cummins	Cummins	Cummins	Bearward	Cummins	Tramont

UUT Properties

Model Number	Lowest Natural Frequency (Hz)			KW	Dimensions (Inches)			Operating Weight(lb.)
	Front-Back	Side to Side	Vertical		Length	Width	Height	
DQDAC (Empty)	5.54	4.4	7.84	300	232	90	128	17695
DQDAC (Full)	3.11	4.40	6.98	300	232	90	128	29504

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2013	ICC-ES-AC156	2.48	0	1.5	2.48	0.99	1.66	0.67
CBC 2013	ICC-ES-AC156	2.00	1	1.5	3.20	2.40	1.34	0.54

Equipment layout on table. Genset secured to a sub-base tank via (4) EBCO 4990-60 duro elastomer isolators.

Note: 1.The units maintained structural integrity and functionality, after the ICC-ES AC 156 test.
2. Units were full of content during tests.

Table 36

UUT-34/A Unit Under Test Summary Sheet

Product Type: Power Generator

Manufacturer: CUMMINS POWER GENERATION

Certified Product Construction:	Tested Configurations:				Tested Mounting Descriptions:
	Mounting Configurations				
	Fuel Tank Options	External Isolators	Internal Isolators	Enclosure Options	
Structural Carbon Steel Skid	UL142	Yes	None	Yes	Genset secured to enclosure base via (10) VMC M2SSH-1E-3400N spring isolators. Subbase tank secured to fixture using (18) 3/4" dia SAE Grade 8 bolts.

Sub-Component

	Engine	Alternator	Controller	Radiator	Enclosure	Fuel Tank
Manufacturer	Cummins	Cummins	Cummins	AKG	Cummins	UAI

UUT Properties

Model Number	Lowest Natural Frequency (Hz)			KW	Dimensions (Inches)			Operating Weight(lb.)
	Front-Back	Side to Side	Vertical		Length	Width	Height	
DQFAD	1.8	3.1	4.7	1000	338	97	137	53, 425

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2013	ICC-ES-AC156	1.94	0	1.5	1.94	0.78	1.30	0.52

Equipment layout on table. Genset secured to enclosure base via (10) VMC M2SSH-1E-3400N spring isolators. Subbase tank secured to fixture using (18) 3/4" dia SAE Grade 8 bolts.

Note: 1.The units maintained structural integrity and functionality, after the ICC-ES AC 156 test.
2. Units were full of content during tests.

Table 37

UUT-34/B Unit Under Test Summary Sheet

Product Type: Power Generator

Manufacturer: CUMMINS POWER GENERATION

Certified Product Construction:	Tested Configurations:				Tested Mounting Descriptions:
	Mounting Configurations				
	Fuel Tank Options	External Isolators	Internal Isolators	Enclosure Options	
Structural Carbon Steel Skid	N/A	Yes	None	N/A	Genset secured to enclosure base via (10) M2SSH-1E-3400N spring isolators. Enclosure base secured to fixture using (18) 3/4" dia SAE Grade 8 bolts.

Sub-Component

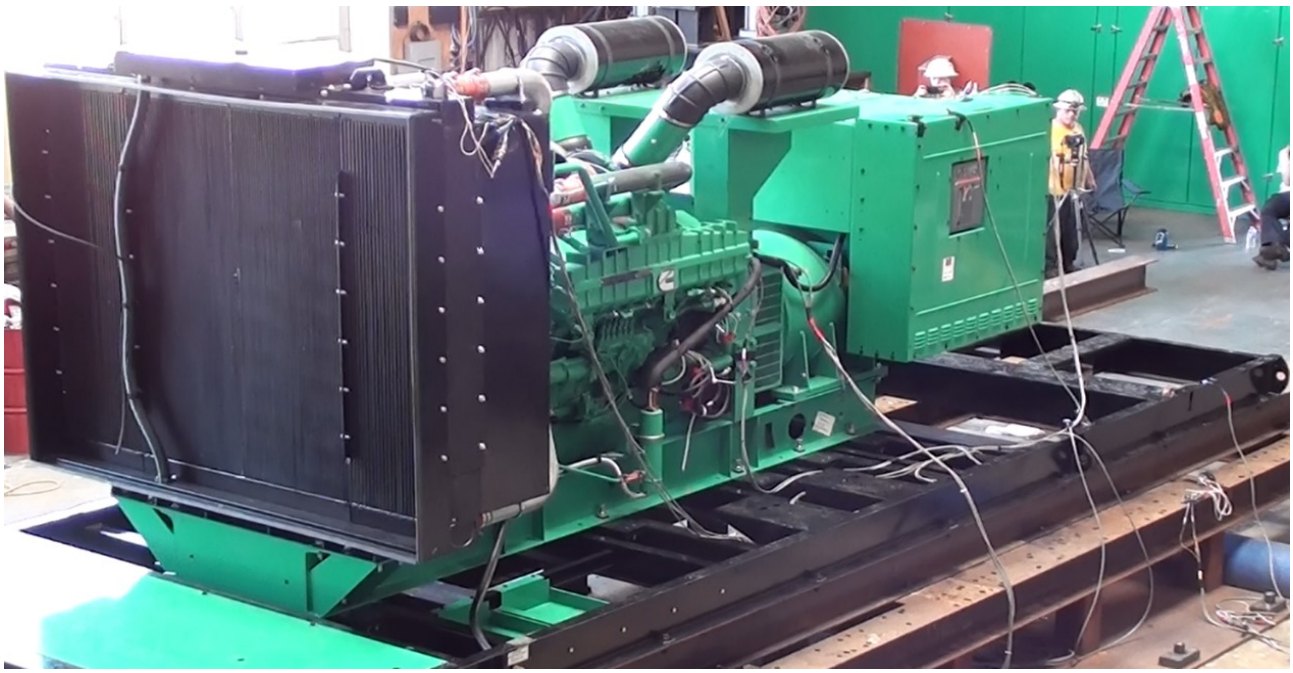
	Engine	Alternator	Controller	Radiator	Enclosure	Fuel Tank
Manufacturer	Cummins	Cummins	Cummins	AKG	N/A	N/A

UUT Properties

Model Number	Lowest Natural Frequency (Hz)			KW	Dimensions (Inches)			Operating Weight(lb.)
	Front-Back	Side to Side	Vertical		Length	Width	Height	
DQFAD	1.6	2.9	4.5	1000	338	97	115	18, 642

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2013	ICC-ES-AC156	1.94	0	1.5	1.94	0.78	1.30	0.52



Equipment layout on table. Genset secured to enclosure base via (10) M2SSH-1E-3400N spring isolators. Enclosure base secured to fixture using (18) 3/4" dia SAE Grade 8 bolts.

Note: 1.The units maintained structural integrity and functionality, after the ICC-ES AC 156 test.
2. Units were full of content during tests.

Table 38

UUT-35/A Unit Under Test Summary Sheet
(Identified as UUT 1A in test report D232865)

Product Type: Power Generator

Manufacturer: CUMMINS POWER GENERATION

Certified Product Construction:	Tested Configurations:		Tested Mounting Descriptions:
	Mounting Configuration		
	Rigid	External Isolators	
PC 3.3 genset controller and 2x Schneider P'frame motorized breaker on DFEJ/K carbon steel support	Yes	N/A	Support assembly secured to fixture using (10) M8x1.5x20 Class 8.8 bolts torqued 24-29 Nm.

Sub-Component

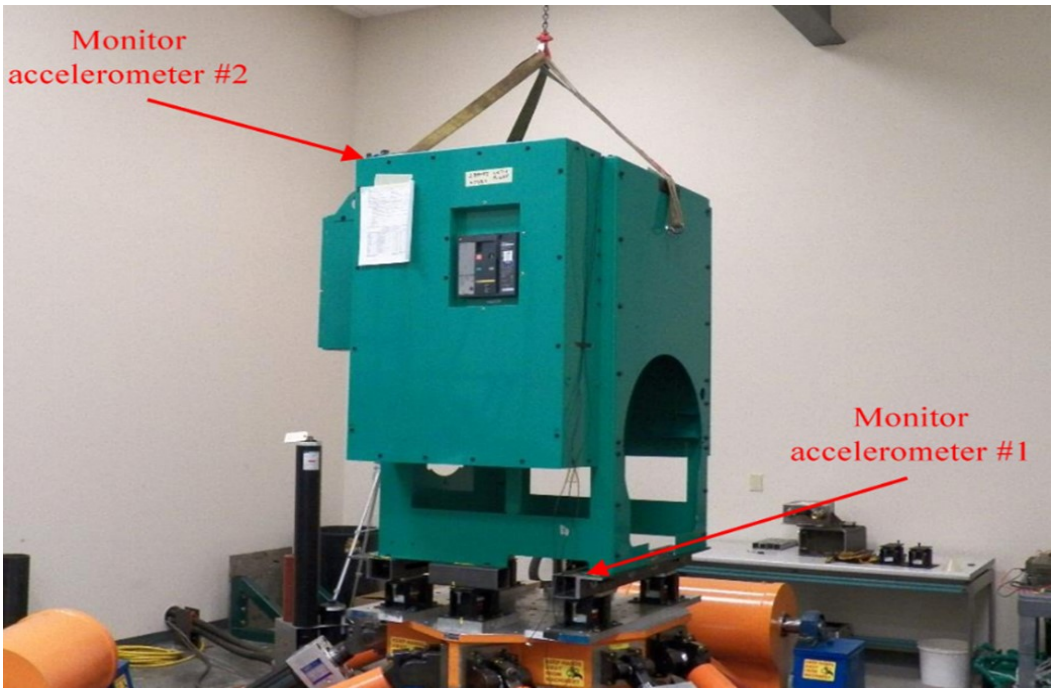
Major Subassembly Contents	Controller	Alternator Support	Controller Enclosure	Circuit Breaker	Breaker Enclosure
	Cummins	Carbon Steel - Cummins	Carbon Steel - Cummins	Schneider P-frame	Carbon Steel - Cummins

UUT Properties

Model Number	Lowest Natural Frequency (Hz)			Voltage	Dimensions (Inches)			Operating Weight(lb.)
	Front-Back (Length)	Side to Side (Width)	Vertical		Length (x)	Width (y)	Height	
DFEJ/K	28.5	7.8	29.1	24V	41	48.6	72	650

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2013	ICC-ES-AC156	1.94	0	1.5	1.94	0.78	1.30	0.52



Equipment layout on table. Support assembly secured to fixture using (10) M8x1.5x20 Class 8.8 Bolts

Note: 1. The units maintained structural integrity and functionality, after the ICC-ES AC 156 test.
2. Units were full of content during tests.

Table 39

UUT-35/B Unit Under Test Summary Sheet
(Identified as UUT 1B in test report D232865)

Product Type: Power Generator | **Manufacturer: CUMMINS POWER GENERATION**

Certified Product Construction:	Tested Configurations:		Tested Mounting Descriptions:
	Mounting Configuration		
	Rigid	External Isolators	
PC 3.3 genset controller and 2x Schneider P'frame motorized breaker on DFEJ/K carbon steel support	N/A	Yes	Support assembly secured to fixture using (4) VMC MSS-1C-150 spring isolators.

Sub-Component

Major Subassembly Contents	Controller	Alternator Support	Controller Enclosure	Circuit Breaker	Breaker Enclosure
	Cummins	Carbon Steel - Cummins	Carbon Steel - Cummins	Schneider P-frame	Carbon Steel - Cummins

UUT Properties

Model Number	Lowest Natural Frequency (Hz)			Voltage	Dimensions (Inches)			Operating Weight(lb.)
	Front-Back (Length)	Side to Side (Width)	Vertical		Length (x)	Width (y)	Height	
DFEJ/K	3.5	4.7	7.6	8.8	41	48.6	72	650

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2013	ICC-ES-AC156	1.94	0	1.5	1.94	0.78	1.30	0.52

Equipment layout on table. Support assembly secured to fixture using (4) VMC MSS-1C-150 spring isolators.

Note: 1. The units maintained structural integrity and functionality, after the ICC-ES AC 156 test.
2. Units were full of content during tests.

Table 40

UUT-36/A Unit Under Test Summary Sheet
(Identified as UUT 2A in test report D232865)

Product Type: Power Generator | **Manufacturer: CUMMINS POWER GENERATION**

Certified Product Construction:	Tested Configurations:		Tested Mounting Descriptions:
	Mounting Configuration		
	Rigid	External Isolators	
PC 3.3 genset control and SENS battery charger on DQCx/DQFAx carbon steel pedestal support	Yes	N/A	Support assembly secured to fixture using (4) M10x1.5x25 Class 8.8 bolts, torqued 47-57 Nm.

Sub-Component

Major Subassembly Contents	Controller	Pedestal Support	Controller Enclosure	Battery Charger	Breaker Enclosure
	Cummins	Carbon Steel - Cummins	Carbon Steel - Cummins	SENS	Carbon Steel - Cummins

UUT Properties

Model Number	Lowest Natural Frequency (Hz)			Voltage	Dimensions (Inches)			Operating Weight(lb.)
	Front-Back (Length)	Side to Side (Width)	Vertical		Length (x)	Width (y)	Height	
DQCx/DQFAx	6.5	4.9	8.8	24V	32.2	14.0	65.5	360

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2013	ICC-ES-AC156	1.94	0	1.5	1.94	0.78	1.30	0.52

Equipment layout on table. Support assembly secured to fixture using (4) M10x1.5x25 Class 8.8 bolts, torqued 47-57 Nm.

Note: 1. The units maintained structural integrity and functionality, after the ICC-ES AC 156 test.
2. Units were full of content during tests.

Table 41

UUT-36/B Unit Under Test Summary Sheet
(Identified as UUT 2B in test report D232865)

Product Type: Power Generator | **Manufacturer: CUMMINS POWER GENERATION**

Certified Product Construction:	Tested Configurations:		Tested Mounting Descriptions:
	Mounting Configuration		
	Rigid	External Isolators	
PC 3.3 genset control and SENS battery charger on DQCx/DQFAx carbon steel pedestal support	N/A	Yes	Support assembly secured to fixture using (4) VMC MSS-1C-150 spring isolators.

Sub-Component

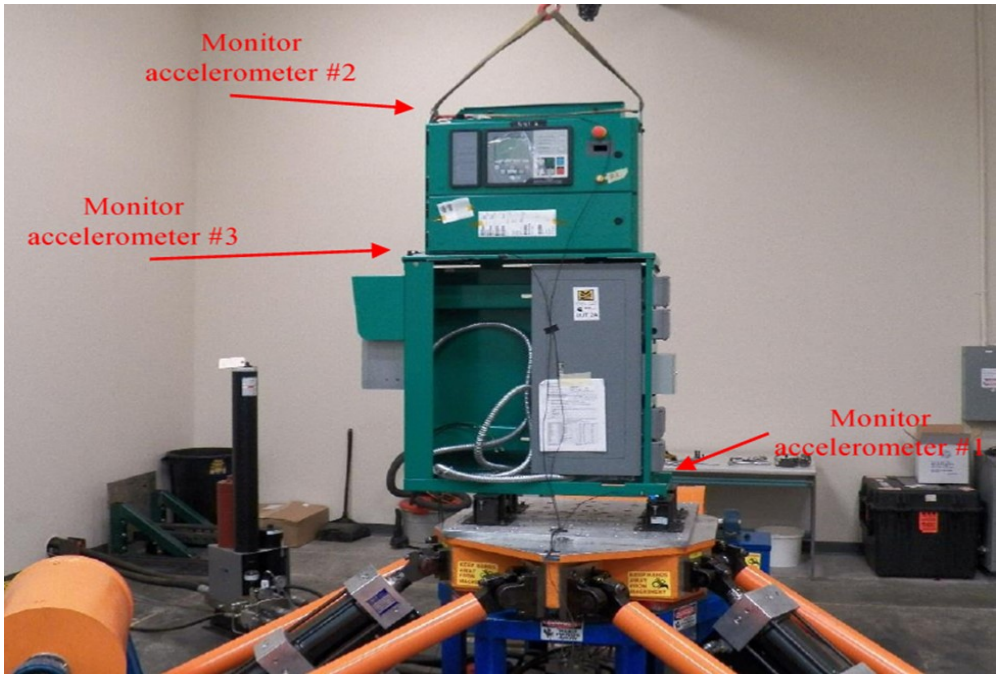
Major Subassembly Contents	Controller	Pedestal Support	Controller Enclosure	Battery Charger	Breaker Enclosure
	Cummins	Carbon Steel - Cummins	Carbon Steel - Cummins	SENS	Carbon Steel - Cummins

UUT Properties

Model Number	Lowest Natural Frequency (Hz)			Voltage	Dimensions (Inches)			Operating Weight(lb.)
	Front-Back (Length)	Side to Side (Width)	Vertical		Length (x)	Width (y)	Height	
DQCx/DQFAx	4.2	2.9	8.4	24V	32.2	14.0	65.5	360

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2013	ICC-ES-AC156	1.94	0	1.5	1.94	0.78	1.30	0.52



Equipment layout on table. Support assembly secured to fixture using (4) VMC MSS-1C-150 spring isolators.

Note: 1. The units maintained structural integrity and functionality, after the ICC-ES AC 156 test.
2. Units were full of content during tests.

Table 42

UUT-37 Unit Under Test Summary Sheet

Product Type: Power Generator

Manufacturer: CUMMINS POWER GENERATION

Certified Product Construction:	Tested Configurations:				Tested Mounting Descriptions:
	Mounting Configurations				
	Fuel Tank Options	External Isolators	Internal Isolators	Enclosure Options	
Structural Carbon Steel Skid and Carbon Steel Sheet Metal Enclosure	UL142	None	Yes	Yes	Subbase tank secured to fixture using (2) 3/4" dia SAE grade 5 bolts and (2) 3/4" dia SAE grade 9 strain measurement bolts.

Sub-Component

	Engine	Alternator	Controller	Radiator	Enclosure	Fuel Tank
Manufacturer	Cummins	Cummins	Cummins	Enterex	Cummins	UAI (United Alloy Inc)

UUT Properties

Model Number	Lowest Natural Frequency (Hz)			KW	Dimensions (Inches)			Operating Weight(lb.)
	Front-Back	Side to Side	Vertical		Length	Width	Height	
DSHAD	7.8	4.9	11.7	230	143	42	110	5800

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2013	ICC-ES-AC156	2.48	0	1.5	2.48	0.99	1.66	0.67
CBC 2013	ICC-ES-AC156	2.28	1	1.5	3.65	2.74	1.53	0.62

Equipment layout on table. Subbase tank secured to fixture using (2) 3/4" dia SAE grade 5 bolts and (2) 3/4" SAE grade 9 strain measurement bolts.

Note: 1.The unit maintained structural integrity and functionality, after the ICC-ES AC 156 test.
2. Unit was full of content during test, except fuel tank.