



**OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT  
FACILITIES DEVELOPMENT DIVISION**

**APPLICATION FOR OSHPD SPECIAL SEISMIC  
CERTIFICATION PREAPPROVAL (OSP)**

OFFICE USE ONLY

APPLICATION #: **OSP – 0487 – 10**

**OSHPD Special Seismic Certification Preapproval (OSP)**

Type:  New  Renewal

**Manufacturer Information**

Manufacturer: Eaton Corporation

Manufacturer's Technical Representative: Mario Perciballi

Mailing Address: 3301 Spring Forest Rd, Raleigh, NC 27616

Telephone: 919-878-1071 Email: [MarioAPerciballi@Eaton.com](mailto:MarioAPerciballi@Eaton.com)

**Product Information**

Product Name: 9390 UPS and Accessories

Product Type: Uninterruptable Power Supplies and Accessories

Product Model Number: 9390 UPS, 9390 IDC, 9390 IAC (see certified product matrices)

(List all unique product identification numbers and/or part numbers)

General Description: Backup power systems constructed of formed carbon steel framing and cabinets with capacity  
Ranging from 40 – 160 kVA. Distribution cabinets and accessory cabinets are also included.

Mounting Description: Base mounted – rigid supported

**Applicant Information**

Applicant Company Name: TRU Compliance, LLC

Contact Person: Matthew Tobolski, PhD, SE

Mailing Address: 960 SW Disk Dr., Suite 104, Bend, OR 97702

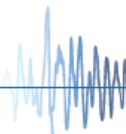
Telephone: 844.878.0200 Email: [mtobolski@trucompliance.com](mailto:mtobolski@trucompliance.com)

I hereby agree to reimburse the Office of Statewide Health Planning and Development review fees in accordance with the California Administrative Code, 2016.

Signature of Applicant:  Date: 10/15/2016

Title: President Company Name: TRU Compliance, LLC

"Access to Safe, Quality Healthcare Environments that Meet California's Diverse and Dynamic Needs"





**OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT  
FACILITIES DEVELOPMENT DIVISION**

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

Company Name: TRU Compliance, LLC  
Name: Matthew Tobolski, PhD, SE California License Number: S5648  
Mailing Address: 960 SW Disk Dr., Suite 104, Bend, OR 97702  
Telephone: 844.878.0200 Email: mtobolski@trucompliance.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**

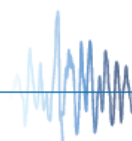
- Testing in accordance with:  ICC-ES AC156
- Other (Please Specify): \_\_\_\_\_

**Testing Laboratory**

Company Name: NTS (formerly Wyle Laboratories)  
Contact Name: Tom Boonarkat  
Mailing Address: 7800 Highway 20 West, Huntsville, AL 35806  
Telephone: (256) 837-4411 Email: [Tom.Boonarkat@nts.com](mailto:Tom.Boonarkat@nts.com)

Company Name: Westinghouse  
Contact Name: Allen Mackey  
Mailing Address: 1000 Westinghouse D, New Stanton, PA  
Telephone: (724) 722-6423 Email: [mackeyag@westinghouse.com](mailto:mackeyag@westinghouse.com)

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FACILITIES DEVELOPMENT DIVISION**

**Seismic Parameters**

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

Design Basis of Equipment or Components ( $F_p/W_p$ ) = 1.04

$S_{DS}$  (Design spectral response acceleration at short period, g) = 1.44g @ z/h=1; 2.30g @ z/h=0

$a_p$  (In-structure equipment or component amplification factor) = 1.0

$R_p$  (Equipment or component response modification factor) = 2.5

$\Omega_0$  (System overstrength factor) = 2.0

$I_p$  (Importance factor) = 1.5

z/h (Height factor ratio) = 1.0 and 0

Equipment or Component Natural Frequencies (Hz) = See Attachment

Overall dimensions and weight (or range thereof) = See Attachment

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) = \_\_\_\_\_

$\Omega_0$  (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, 2015:  Yes  No

**List of Attachments Supporting Special Seismic Certification**

Test Report(s)  Drawings  Calculations  Manufacturer's Catalog

Other(s) (Please Specify): Attachment

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

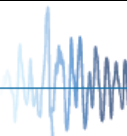
Signature:  Date: May 22, 2017

Print Name: Ali Sumer Title: DSE

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

Condition of Approval (if applicable): \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_



# SPECIAL SEISMIC CERTIFICATION CERTIFIED COMPONENT MATRIX

TRU PROJECT NO. 16031



<b>Manufacturer:</b> EATON Corporation	<b>TABLE 1</b>
<b>Model Line:</b> 9390 UPS	

**Certified Product Construction Summary:**  
Formed carbon steel internal framing with carbon steel panelized walls, base and roof.

**Certified Options Summary:**  
See Certified Subcomponent Matrices

**Mounting Configuration:**  
Base mounted - rigid  
Note: Installed mounting configuration must be of similar configuration and equivalent strength and stiffness to those tested.

**Building Code: CBC 2016**      **Seismic Certification Limits:**       $S_{DS} = 1.44$      $z/h=1.0$        $I_p = 1.5$   
 $S_{DS} = 2.3$      $z/h=0.0$

Model Line	Model <sup>1,3</sup>	Dimensions (in) <sup>2</sup>			Weight (lb) <sup>2</sup>	Notes	UUT
		Depth	Width	Height			
9390 UPS	TAXXXX0011*X0X0	31.7	27.6	73.8	850	40 kVA	Extrap.
	TBXXX0011*X0X0	31.7	27.6	73.8	900	80 kVA	Interp.
	TB0811001133010	31.7	27.6	73.8	900	80 kVA	6
	TCXXX0011*X0X0	31.7	44.3	73.8	1298	120 kVA	Interp.
	TDXXX0011*X0X0	31.7	44.3	73.8	1388	160 kVA	Interp.
	TD1612001134010	31.7	44.3	73.8	1388	160 kVA	7
9390 IDC Integrated Distribution Cabinet	T04XXXXXXXX000X	31.7	37.2	73.8	1356	40 kVA	Extrap.
	T08XXXXXXXX1000X	31.7	37.2	73.8	1356	80 kVA	Interp.
	T08153343100021	31.7	37.2	73.8	1356	80 kVA	8
	T12XXXXXXXX1000X	31.7	44.4	73.8	2028	120 kVA	Interp.
	T16XXXXXXXX1000X	31.7	44.4	73.8	2028	160 kVA	Interp.
	T16153343100021	31.7	44.4	73.8	2028	160 kVA	9
9390 IAC Int. Acc. Cabinet	TMXX0XX00XX0X	31.7	24.4	73.8	490	IAC-B	Extrap.
	TTXX0XX00XX0X	31.7	24.4	73.8	490	IAC-T	Interp.
	TT16011620000001	31.7	24.4	73.8	490	IAC-T	10

<sup>1</sup> "X" Indicates selection digit not critical to seismic performance; most severe configuration was used for testing  
<sup>2</sup> Maximum dimensions without seismic mounting kit, maximum weight includes seismic mounting kit  
<sup>3</sup> "\*\*\*" Internal battery options are NOT approved for seismic applications

# SPECIAL SEISMIC CERTIFICATION PRODUCT NOMENCLATURE

TRU PROJECT NO. 16031



<b>Manufacturer:</b> EATON Corporation		<b>TABLE 1.1</b>	
<b>Model Line:</b> 9390 UPS Nomenclature			
<b>Digit</b>	<b>Item</b>	<b>Description</b>	<b>UUT</b>
1	Model Line	T = Powerwave 9390	6,7
2	Product Family	A = 9390-40	
		B = 9390-80	6
		C = 9390-120	
		D = 9390-160	7
3-4	kVA Rating	02 = 20 kVA	
		03 = 30 kVA	
		04 = 40 kVA	
		05 = 50 kVA	
		06 = 60 kVA	
		08 = 80 kVA	6
		10 = 100 kVA	
		12 = 120 kVA	
		16 = 160 kVA	7
5	Application	1 = RT (not critical to seismic, programming)	6,7
		2 = Parallel (not critical to seismic, programming)	
		3 = Frequency Conversion (not critical to seismic, programming)	
		4 = Power conditioning (not critical to seismic, programming)	
		5 = Power cond gen ctrl (not critical to seismic, programming)	
		A = RT with ESM (not critical to seismic, programming)	
		B = Parallel with ESM (not critical to seismic, programming)	
6	Configuration	1 = 208V IN/OUT 60 Hz	6
		2 = 480V IN/OUT 60 Hz	7
		3 = 400V IN/OUT 50 Hz	
		4 = 400V IN/OUT 60 Hz	
		5 = 400V IN/OUT 50 Hz w/ internal maintenance bypass	
		6 = 400V IN/OUT 60 Hz w/ internal maintenance bypass	
		7 = 208V IN/OUT 50 Hz	
		8 = 480V IN/OUT 50 Hz	
		9 = 220V IN/208V OUT 60 Hz	
		A = 220V IN/208V OUT 50 Hz	
		B = 220V IN/OUT 60 Hz	
		C = 220V IN/OUT 50 Hz	
		D = 380V IN/OUT 50 Hz	
		E = 380V IN/OUT 60 Hz	
		F = 415V IN/OUT 50 Hz	
		G = 415V IN/OUT 60 Hz	

# SPECIAL SEISMIC CERTIFICATION PRODUCT NOMENCLATURE

TRU PROJECT NO. 16031



<b>Manufacturer:</b> EATON Corporation			
<b>Model Line:</b> 9390 UPS Nomenclature		<b>TABLE 1.1</b>	
<b>Digit</b>	<b>Item</b>	<b>Description</b>	<b>UUT</b>
7	Communications Options 1	0 = None	6,7
		1 = N/A	
		2 = Parallel / RMP card	
		4 = MODBUS card	
		5 = Relay card	
		6 = Industrial relay card	
		7 = N/A	
		A = Power-X gateway	
8	Communications Options 2	0 = None	6,7
		1 = N/A	
		2 = Parallel / RMP card	
		3 = N/A	
		4 = N/A	
		5 = Relay card	
		6 = Industrial relay card	
		7 = N/A	
9	Communications Options 3	1 = Mini CSB option	6,7
		2 = Parallel / RMP card	
		4 = MODBUS card	
		5 = Relay card	
		6 = Industrial relay card	
		7 = N/A	
		A = Power-X gateway	
		10	
2 = Parallel / RMP card			
4 = MODBUS card			
5 = Relay card			
6 = Industrial relay card			
7 = N/A			
A = Power-X gateway			

# SPECIAL SEISMIC CERTIFICATION PRODUCT NOMENCLATURE

TRU PROJECT NO. 16031



<b>Manufacturer:</b> EATON Corporation		<b>TABLE 1.1</b>	
<b>Model Line:</b> 9390 UPS Nomenclature			
<b>Digit</b>	<b>Item</b>	<b>Description</b>	<b>UUT</b>
11	Battery Voltage	1 = 384V (192 cells)	
		2 = 432V (216 cells)	
		3 = 480V (240 cells)	6,7
		4 = 2 string internal battery (240 cells)	
		5 = 3 string internal battery (240 cells)	
		6 = EnerSys RH 185 NICAD (370 cells)	
		7 = SAFT SPH 100 NICAD (380 cells)	
		8 = 480V 9390 (240 cells)	
12	Options	0 = Standard no bypass option	
		1 = Internal service bypass	
		2 = Maintenance bypass sidecar 2 breaker	
		3 = Maintenance bypass sidecar 3 breaker	6
		4 = Maintenance bypass sidecar 4 breaker	7
		8 = Tie cabinet sidecar 2 breaker	
		9 = Tie cabinet sidecar 3 breaker	
		D = Tie cabinet sidecar 3 breaker	
		G = GE medical sidecar 250A (branding)	
		H = GE medical sidecar 100A (branding)	
		J = Receptacle sidecar L6-20R	
		K = Receptacle sidecar L6-30R	
		L = Receptacle sidecar L15-20R	
		M = Receptacle sidecar L15-30R	
N = Receptacle sidecar L15-30R			
P = Receptacle sidecar L2X-30R			
R = Receptacle sidecar IEC-309-60A			
13	Neutral Forming Transformer	0 = None	6,7
		1 = 480V	
		2 = 208V	
14	Language	1 - F = Not critical to seismic	6,7
15	Accessories	0 = No accessories	6,7
		1 = Dress skins	
		2 = Load sync control	
		3 = Dress skins and load sync control	

# SPECIAL SEISMIC CERTIFICATION PRODUCT NOMENCLATURE

TRU PROJECT NO. 16031



<b>Manufacturer:</b> EATON Corporation		<b>TABLE 1.2</b>	
<b>Model Line:</b> 9390 IDC Nomenclature			
<b>Digit</b>	<b>Item</b>	<b>Description</b>	<b>UUT</b>
1	Model Line	T = Powerwave 9390	8,9
2-3	Configuration/kVA	03 = 30 kVA	
		04 = 40 kVA	
		05 = 50 kVA	
		06 = 60 kVA	
		08 = 80 kVA	8
		10 = 100 kVA	
		12 = 120 kVA	
		16 = 160 kVA	9
		00 = Sidecar	
4	Breaker Ratings	1 = Standard kAIC	8,9
		2 = High kAIC	
5	Input / Output	1 = 208V IN/OUT 60 Hz	
		2 = 480V IN/OUT 60 Hz	
		3 = 400V IN/OUT 50 Hz	
		4 = 400V IN/OUT 60 Hz	
		5 = 480V IN/208V OUT 60 Hz	8,9
		6 = 600V IN/208V OUT 60 Hz	
		7 = 600V IN/OUT 60 Hz	
6	Maintenance Bypass	0 = None	
		1 = Maintenance bypass	
		2 = Maintenance bypass with BIB	
		3 = Maintenance bypass with BIB and RIB	8,9
7	Transformer	0 = None	
		1 = K1 Al	
		2 = K13 Al	
		3 = K20 Al	8,9
		4 = K1 Cu	
		5 = K13 Cu	
		6 = K20 Cu	
8	Output Configuration (left)	0 = None	
		1 = 1x 250A breaker	
		2 = 2x 250A breaker	
		3 = 3x 250A breaker	
		4 = 42 pole panelboard	8,9



# SPECIAL SEISMIC CERTIFICATION PRODUCT NOMENCLATURE

TRU PROJECT NO. 16031



<b>Manufacturer:</b> EATON Corporation <b>Model Line:</b> 9390 IDC Nomenclature		<b>TABLE 1.2</b>	
Digit	Item	Description	UUT
9	Output Configuration (right)	0 = Lugs	
		1 = 1x 250A breaker	
		2 = 2x 250A breaker	
		3 = 3x 250A breaker	8,9
		4 = 42 pole panelboard	
10	Seismic Rated	0 = Standard	
		1 = Zone 4 rated	8,9
11	Open	0 = None	8,9
12	Open	0 = None	8,9
13	Open	0 = None	8,9
14	Options	0 = None	
		1 = Display	
		2 = Dress skins	8,9
		3 = Display and dress skins	
15	Language	1-8 = Not critical to seismic	8,9

# SPECIAL SEISMIC CERTIFICATION PRODUCT NOMENCLATURE

TRU PROJECT NO. 16031



<b>Manufacturer:</b> EATON Corporation		<b>TABLE 1.3</b>	
<b>Model Line:</b> 9390 IAC Nomenclature			
<b>Digit</b>	<b>Item</b>	<b>Description</b>	<b>UUT</b>
1	Model Line	T = Powerwave 9390	10
2	Cabinet Use	M = Maintenance bypass	
		T = Tie cabinet	10
3-4	Associated UPS Model	04 = 40 kVA	
		08 = 80 kVA	
		12 = 120 kVA	
		16 = 160 kVA	10
5	Open	0 = None	10
6	Input / Output	1 = 208V IN/OUT 60 Hz	10
		2 = 480V IN/OUT 60 Hz	
		3 = 400V IN/OUT 50 Hz	
		4 = 400V IN/OUT 60 Hz	
		7 = 208V IN/OUT 50 Hz	
		8 = 480V IN/OUT 50 Hz	
7	Breaker Ratings	1 = Standard kAIC	10
		2 = High kAIC	
8	Cabinet Configuration	1 = MBP 2 bkr	
		2 = MBP 3 bkr	
		3 = MBP 4 bkr	
		4 = Tie 2 bkr	
		5 = Tie 2 bkr 1 SLB bkr	
		6 = Tie/MBP 2 tie bkr, 2 MBP bkr	10
9	Remote Line/Match	1 = Line up / match	
		2 = Remote	10
10	Open	0 = None	10
11	Open	0 = None	10
12	Cables	0 = None	10
		1 = 120 kVA 208V	
		2 = 160 kVA 208V	
13	Distribution Breakers	0 = None	10
		1 = (2) 250A Trip	
		2 = (2) 100A Trip	
		3 = (1) each 100A and 250A	
14	Open	0 = None	10
15	Language	1-8 = Not critical to seismic	10

**SPECIAL SEISMIC CERTIFICATION  
CERTIFIED SUBCOMPONENT MATRIX**

**TRU PROJECT NO. 16031**



<i>Manufacturer:</i> EATON Corporation		<i>Table Description:</i> FRAMES					<b>TABLE 2</b>	
<i>Model Line:</i> 9390 UPS								
<i>Building Code:</i> CBC 2016		<i>Seismic Certification Limits:</i>					$I_p = 1.5$	
		$S_{DS} = 1.44 \quad z/h = 1.0$						
		$S_{DS} = 2.3 \quad z/h = 0.0$						
Model Line (Manufacturer)	Model	Dimension (in)			Weight (lb)	Material	Notes	UUT
		Depth	Width	Height				
9390 FRAME (EATON)	20-80 kVA	31.7	27.6	73.8	507	11 GA TO 18 GA CRS		6
	100-160 kVA	31.7	44.3	73.8	792	11 GA TO 18 GA CRS		7
	IAC	31.7	24.4	73.8	297	11 GA TO 18 GA CRS		10
	20-80 kVA IDC	31.7	37.2	73.8	525	11 GA TO 18 GA CRS		8
	160 kVA IDC	31.7	44.4	73.8	609	7 GA TO 18 GA CRS		9
9390 SEISMIC KIT (EATON)	103004179					CRS	9390 UPS	Extrap.
	103004422					CRS	9390 IDC/IAC	8,9,10
	103004423					CRS	9390 UPS w/ SIDECAR	6,7

# SPECIAL SEISMIC CERTIFICATION CERTIFIED SUBCOMPONENT MATRIX

TRU PROJECT NO. 16031



<b>Manufacturer:</b> EATON Corporation	<b>Table Description:</b> CIRCUIT BREAKERS	<b>TABLE 3</b>
<b>Model Line:</b> 9390 UPS		

<b>Building Code:</b> CBC 2016	<b>Seismic Certification Limits:</b>	$S_{DS} = 1.44$ $z/h = 1.0$	$I_P = 1.5$
		$S_{DS} = 2.3$ $z/h = 0.0$	

Component Type	Manufacturer	Model	Description	Notes	UUT
CIRCUIT BREAKER	EATON (E-FRAME) (F-FRAME)	EGS3070FFG	70A, 3 POLE, Thermal Trip		Extrap.
		EGK3125KSG	125A, 3 POLE, Thermal Trip		Extrap.
		FD3225KLA06	225A, 3 POLE		Extrap.
	EATON (J-FRAME)	JGC3150FAG	150A, 3 POLE, Thermal Trip		8
		JGS3150FAWZ1	150A, 3 POLE, Thermal Trip		Interp.
		JGS3175FAWZ1	175A, 3 POLE, Thermal Trip		Interp.
		JGS3225FAG	225A, 3 POLE, Thermal Trip		8
		JGS3225FAWZ1	225A, 3 POLE, Thermal Trip		Interp.
		JGS325033WZ1	250A, 3 POLE, ETU		Interp.
		JGS325033G	250A, 3 POLE, ETU		8, 9
		KD3300W	300A, 3 POLE, Thermal Trip		7
		KD3300WA06	300A, 3 POLE, Thermal Trip		7
		EATON (K-FRAME)	KD3350W	350A, 3 POLE, Thermal Trip	
	KD3350WA13		350A, 3 POLE, Thermal Trip		6
	KD3400KWA06		400A, 3 POLE, Thermal Trip		Interp.
	KD3400FK03P27		400A, 3 POLE, Thermal Trip		6, 7
	LGE3500FAW		500A, 3 POLE, Thermal Trip		Interp.
	EATON (L-FRAME)	LGE3600FAQ	600A, 3 POLE, Thermal Trip		10
		LD3600WKA06	600A, 3 POLE, Thermal Trip		Interp.
		LGE3600FAW	600A, 3 POLE, Thermal Trip		Interp.
		LGE360033W	600A, 3 POLE, ETU		10
		CLDB3600FT33WP05	600A, 3 POLE, ETU		Interp.

# SPECIAL SEISMIC CERTIFICATION CERTIFIED SUBCOMPONENT MATRIX

TRU PROJECT NO. 16031



<b>Manufacturer:</b> EATON Corporation	<b>Table Description:</b> TRANSFORMERS	<b>TABLE 4</b>
<b>Model Line:</b> 9390 UPS		

<b>Building Code:</b> CBC 2016	<b>Seismic Certification Limits:</b>	$S_{DS} = 1.44$ $z/h = 1.0$	$I_P = 1.5$
		$S_{DS} = 2.3$ $z/h = 0.0$	

Component Type	Manufacturer	Model	Description	Notes	UUT
TRANSFORMER	EATON	V40004	40 kVA, K1, 208/208 (Al)		Extrap.
		N40002	40 kVA, K13, 208/208 (Al)		Extrap.
		G40002	40 kVA, K20, 208/208 (Al)		Extrap.
		V40003	40 kVA, K1, 480/208 (Al)		Extrap.
		N40001	40 kVA, K13, 480/208 (Al)		Extrap.
		G40001	40 kVA, K20, 480/208 (Al)		Extrap.
		V88002	80 kVA, K1, 208/208 (Al)		Interp.
		N88002	80 kVA, K13, 208/208 (Al)		Interp.
		G88002	80 kVA, K20, 208/208 (Al)		Interp.
		V88001	80 kVA, K1, 480/208 (Al)		Interp.
		N88001	80 kVA, K13, 480/208 (Al)		Interp.
		G88001	80 kVA, K20, 480/208 (Al)		8
		V90001	120 kVA, K1, 480 (Al)		Interp.
		N90001	120 kVA, K13, 480 (Al)		Interp.
		G90001	120 kVA, K20, 480 (Al)		Interp.
		V89001	160 kVA, K1, 480/208 (Al)		Interp.
		N89001	160 kVA, K13, 480/208 (Al)		Interp.
G89001	160 kVA, K20, 480/208 (Al)		9		

# SPECIAL SEISMIC CERTIFICATION CERTIFIED SUBCOMPONENT MATRIX

TRU PROJECT NO. 16031



<i>Manufacturer:</i> EATON Corporation		<i>Table Description:</i> POWER & ELECTRIC MODULES, BATTERY			<b>TABLE 5</b>
<i>Model Line:</i> 9390 UPS					
<i>Building Code:</i> CBC 2016		<i>Seismic Certification Limits:</i>		$I_p = 1.5$	
		$S_{DS} = 1.44 \quad z/h = 1.0$			
		$S_{DS} = 2.3 \quad z/h = 0.0$			
Component Type	Manufacturer	Model	Description	Notes	UUT
POWER MODULE	EATON	P-103000625	208V, slide tray		6
		P-103000626	400V, slide tray		Interp.
		P-103000627	480V, slide tray		7
STATIC SWITCH	EATON	103003651	250A		6,7
CONTACTOR	ABB	AF185-30-11-72	20-60 VDC, 3 PH		6
	EATON	XTCE185L22TD	185A, 3 Pole		7



# UNIT UNDER TEST (UUT) SUMMARY SHEET

TRU PROJECT NO. 16031



<b>Manufacturer:</b> EATON Corporation	<b>UUT 6</b>
<b>Model Line:</b> 9390 UPS	
<b>Model Number:</b> TB0811001133010 <b>Serial Number:</b> 7490900	

**Product Construction Summary:**  
Formed carbon steel internal framing with carbon steel panelized walls, base and roof.

**Options/Subcomponent Summary:**  
**Frame:** 9390 20-80 kVA; **Seismic Kit:** 103004423; **Breakers:** KD3350W, KD3350WA13, KD3400FK03P27; **Power Module:** P-103000625; **Static Switch:** 103003651; **Contactors:** AF185-30-11-72

**UUT Properties**

Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
900	32	28	74	8.1	6.7	>33

**UUT Highest Passed Seismic Run Information**

Building Code	Test Criteria	S <sub>DS</sub>	z/h	I <sub>p</sub>	A <sub>FLX-H</sub>	A <sub>RIG-H</sub>	A <sub>FLX-V</sub>	A <sub>RIG-V</sub>
CBC 2016	ICC-ES AC156	1.44	1.0	1.5	2.30	1.73	0.96	0.39
		2.30	0.0	1.5	2.30	0.92	1.54	0.62

**Test Mounting Details:**



10 Φ M10, Class 8.8 bolts  
Unit maintained structural integrity and remained functional per manufacturer requirement.  
Contents were included in testing per operating conditions.



# UNIT UNDER TEST (UUT) SUMMARY SHEET

TRU PROJECT NO. 16031



<b>Manufacturer:</b> EATON Corporation	<b>UUT 7</b>
<b>Model Line:</b> 9390 UPS	
<b>Model Number:</b> TD1612001134010	
<b>Serial Number:</b> 9273900	

**Product Construction Summary:**  
Formed carbon steel internal framing with carbon steel panelized walls, base and roof.

**Options/Subcomponent Summary:**  
**Frame:** 9390 100-160 kVA; **Seismic Kit:** 103004423; **Breakers:** KD3300W, KD3300WA06, KD3400FK03P27; **Power Module:** P-103000627; **Static Switch:** 103003651; **Contactors:** XTCE185L22TD

### UUT Properties

Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
1388	32	44	74	7.0	6.5	>33

### UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S <sub>DS</sub>	z/h	I <sub>P</sub>	A <sub>FLX-H</sub>	A <sub>RIG-H</sub>	A <sub>FLX-V</sub>	A <sub>RIG-V</sub>
CBC 2016	ICC-ES AC156	2.02	1.0	1.5	3.23	2.42	1.35	0.55
		3.23	0.0	1.5	3.23	1.29	2.16	0.87

**Test Mounting Details:**



14 Φ M10, Class 8.8 bolts  
Unit maintained structural integrity and remained functional per manufacturer requirement.  
Contents were included in testing per operating conditions.

# UNIT UNDER TEST (UUT) SUMMARY SHEET



TRU PROJECT NO. 16031

**Manufacturer:** EATON Corporation  
**Model Line:** 9390 UPS  
**Model Number:** T08153343100021

**UUT 8**

**Product Construction Summary:**  
 Formed carbon steel internal framing with carbon steel panelized walls, base and roof.

**Options/Subcomponent Summary:**  
**Frame:** 9390 20-80 kVA IDC; **Seismic Kit:** 103004422; **Breakers:** JGC3150FAG, JGS3225FAG, JGS325033G; **Transformers:** G88001;

**UUT Properties**

Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
1356	32	37	74	9.3	14	>33

**UUT Highest Passed Seismic Run Information**

Building Code	Test Criteria	S <sub>DS</sub>	z/h	I <sub>p</sub>	A <sub>FLX-H</sub>	A <sub>RIG-H</sub>	A <sub>FLX-V</sub>	A <sub>RIG-V</sub>
CBC 2016	ICC-ES AC156	1.97	1.0	1.5	3.15	2.36	1.32	0.53
		3.15	0.0	1.5	3.15	1.26	2.11	0.85

**Test Mounting Details:**



14 Φ M10, Class 8.8 bolts  
 Unit maintained structural integrity and remained functional per manufacturer requirement.  
 Contents were included in testing per operating conditions.

# UNIT UNDER TEST (UUT) SUMMARY SHEET

TRU PROJECT NO. 16031



**Manufacturer:** EATON Corporation  
**Model Line:** 9390 UPS  
**Model Number:** T16153343100021

**UUT 9**

**Product Construction Summary:**  
 Formed carbon steel internal framing with carbon steel panelized walls, base and roof.

**Options/Subcomponent Summary:**  
**Frame:** 9390 160 kVA IDC; **Seismic Kit:** 103004422; **Breakers:** JGS325033G; **Transformers:** G89001;

**UUT Properties**

Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
2028	32	44	74	6.2	9.2	>33

**UUT Highest Passed Seismic Run Information**

Building Code	Test Criteria	S <sub>DS</sub>	z/h	I <sub>p</sub>	A <sub>FLX-H</sub>	A <sub>RIG-H</sub>	A <sub>FLX-V</sub>	A <sub>RIG-V</sub>
CBC 2016	ICC-ES AC156	1.97	1.0	1.5	3.15	2.36	1.32	0.53
		3.15	0.0	1.5	3.15	1.26	2.11	0.85

**Test Mounting Details:**



16 Φ M10, Class 8.8 bolts  
 Unit maintained structural integrity and remained functional per manufacturer requirement.  
 Contents were included in testing per operating conditions.

# UNIT UNDER TEST (UUT) SUMMARY SHEET

TRU PROJECT NO. 16031



**Manufacturer:** EATON Corporation  
**Model Line:** 9390 UPS  
**Model Number:** TT16011620000001

**UUT 10**

**Product Construction Summary:**  
 Formed carbon steel internal framing with carbon steel panelized walls, base and roof.

**Options/Subcomponent Summary:**  
**Frame:** 9390 IAC; **Seismic Kit:** 103004422; **Breakers:** LGE3600FAQ, LGE360033W;

**UUT Properties**

Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
490	31	24	74	7.0	7.2	>33

**UUT Highest Passed Seismic Run Information**

Building Code	Test Criteria	S <sub>DS</sub>	z/h	I <sub>p</sub>	A <sub>FLX-H</sub>	A <sub>RIG-H</sub>	A <sub>FLX-V</sub>	A <sub>RIG-V</sub>
CBC 2016	ICC-ES AC156	1.95	1.0	1.5	3.12	2.34	1.31	0.53
		3.62	0.0	1.5	3.62	1.45	2.43	0.98

**Test Mounting Details:**



10 Φ M10, Class 8.8 bolts  
 Unit maintained structural integrity and remained functional per manufacturer requirement.  
 Contents were included in testing per operating conditions.