



DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION
OFFICE OF STATEWIDE HOSPITAL PLANNING AND DEVELOPMENT

APPLICATION FOR HCAI SPECIAL SEISMIC
CERTIFICATION PREAPPROVAL (OSP)

OFFICE USE ONLY

APPLICATION #: OSP-0842

HCAI Special Seismic Certification Preapproval (OSP)

Type: ☒ New ☐ Renewal

Manufacturer Information

Manufacturer: ACME Electric (a Hubbell Company)

Manufacturer's Technical Representative: Jeff Wedig

Mailing Address: N56 W13385 Silver Spring Dr, Menomonee Falls, WI 53051

Telephone: (815) 382-9957

Email: jwedig@hubbell.com

Product Information

Product Name: Transformer Product Family

Product Model Number(s): 3-phase Ventilated Transformers

Product Category: Transformers

Product Sub-Category: Transformers – Dry Type

General Description: Low voltage ventilated dry type transformers with Al and Cu winding in carbon steel enclosures.

Mounting Description: Base Mounted Rigid -

Tested Seismic Enhancements: Seismic enhancements made to the test units and/or modifications required to address anomalies during the tests shall be incorporated into the production units.

Applicant Information

Applicant Company Name: TRU Compliance, by Structural Integrity Associates

Contact Person: Victoria Ahrens

Mailing Address: 5215 Hellyer Ave Suite 210, San Jose, CA 95138

Telephone: (541) 292-5820

Email: vahrens@structint.com

Title: Certification Engineer



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

Company Name: STRUCTURAL INTEGRITY ASSOCIATES, INC.

Name: LACHEZAR HANDZHIYSKI California License Number: S6515

Mailing Address: 5215 Hellyer Avenue, Suite 210, San Jose, CA 95138

Telephone: (669) 437-0200 Email: Lhandzhiyski@StructInt.com

Certification Method

☐ GR-63-Core ☒ ICC-ES AC156 ☐ IEEE 344 ☐ IEEE 693 ☐ NEBS 3
☐ Other (Please Specify): _____

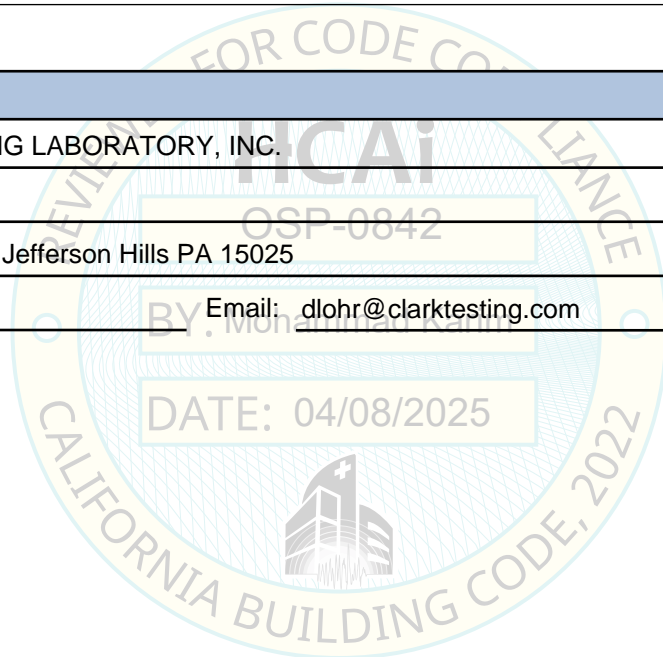
Testing Laboratory

Company Name: CLARK TESTING LABORATORY, INC.

Contact Person: Devon Lohr

Mailing Address: 1801 Route 51, Jefferson Hills PA 15025

Telephone: (412) 387-1001 Email: dlohr@clarktesting.com





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Seismic Parameters

Design Basis of Equipment or Components (F_p/W_p) = 1.44 (SDS=2.0 @ $z/h=1$); 1.125 (SDS=2.5 @ $z/h=0$)

SDS (Design spectral response acceleration at short period, g) = 2.00 ($z/h = 1$); 2.50 ($z/h = 0$)

a_p (Amplification factor) = 1

R_p (Response modification factor) = 2.5

Ω_0 (System overstrength factor) = 2.0

I_p (Importance factor) = 1.5

z/h (Height ratio factor) = 1 and 0

Natural frequencies (Hz) = See Attachment

Overall dimensions and weight = See Attachment

HCAI Approval (For Office Use Only) - Approval Expires on 04/08/2031

Date: 4/8/2025

Name: Mohammad Karim

Title: Supervisor, Health Facilities

Special Seismic Certification Valid Up to: SDS (g) = 2.0

z/h = 1

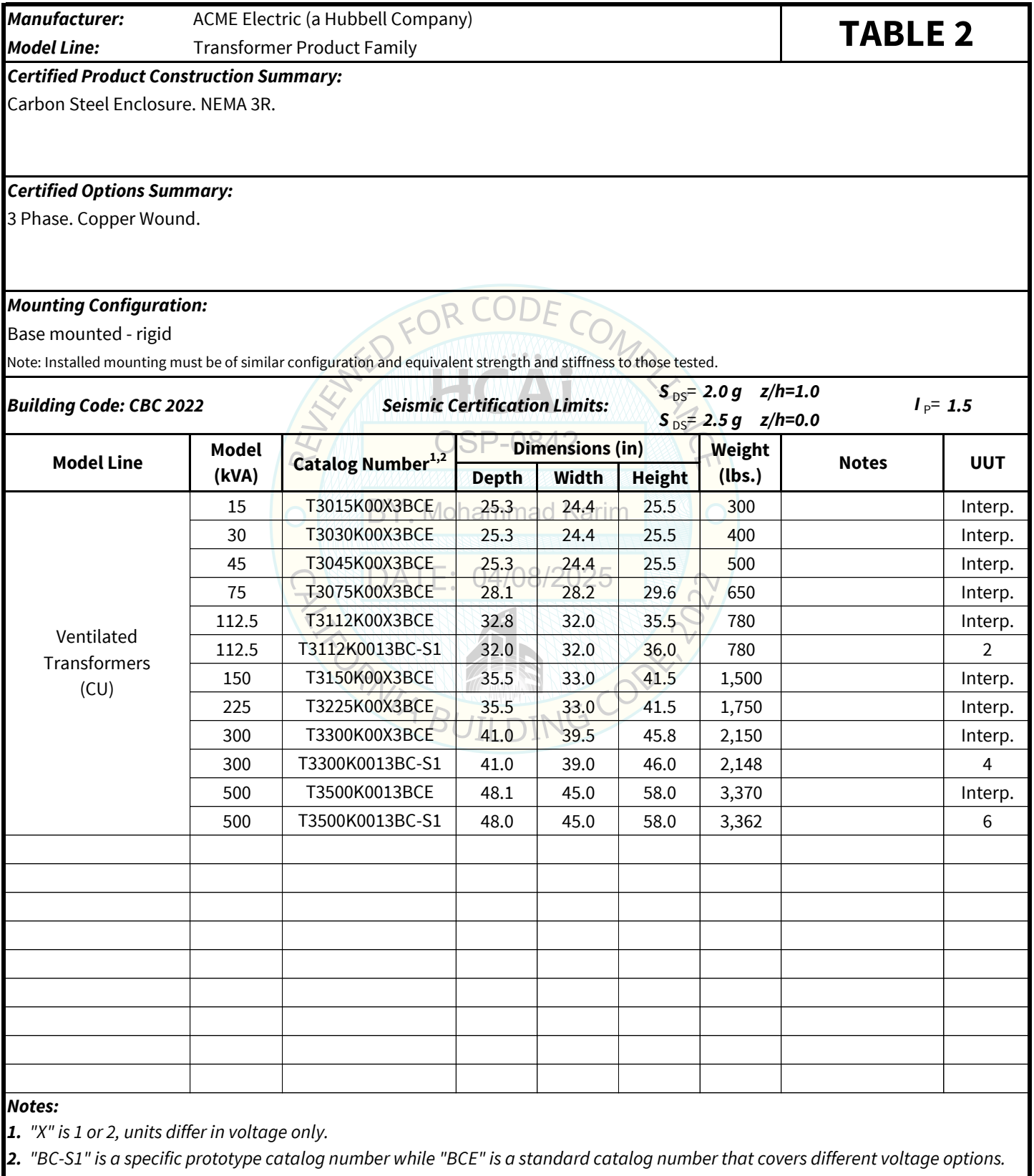
Condition of Approval (if applicable):

2400797-CR-001-R1



Manufacturer: ACME Electric (a Hubbell Company)						TABLE 1		
Model Line: Transformer Product Family								
Certified Product Construction Summary: Carbon Steel Enclosure. NEMA 3R.								
Certified Options Summary: 3 Phase. Aluminum Wound.								
Mounting Configuration: Base mounted - rigid Note: Installed mounting must be of similar configuration and equivalent strength and stiffness to those tested.								
Building Code: CBC 2022			Seismic Certification Limits:			$S_{DS}= 2.0 g \quad z/h=1.0$ $S_{DS}= 2.5 g \quad z/h=0.0$ $I_p= 1.5$		
Model Line	Model (kVA)	Catalog Number ^{1,2}	Dimensions (in)			Weight (lbs.)	Notes	UUT
			Depth	Width	Height			
Ventilated Transformers (AL)	15	T3015K00X3BE	25.3	24.4	25.5	250		Interp.
	30	T3030K00X3BE	25.3	24.4	25.5	360		Interp.
	45	T3045K00X3BE	25.3	24.4	25.5	450		Interp.
	75	T3075K00X3BE	28.1	28.2	29.6	600		Interp.
	112.5	T3112K00X3BE	32.8	32.0	35.5	740		Interp.
	112.5	T3112K0013B-S1	32.0	32.0	36.0	736		1
	150	T3150K00X3BE	35.5	33.0	41.5	1,200		Interp.
	225	T3225K00X3BE	35.5	33.0	41.5	1,500		Interp.
	300	T3300K00X3BE	41.0	39.5	45.8	1,950		Interp.
	300	T3300K0013B-S1	41.0	39.0	46.0	1,950		3
	500	T3500K00X3BE	48.1	45.0	58.0	3,090		Interp.
	500	T3500K0013B-S1	48.0	45.0	58.0	3,088		5
Notes: 1. "X" is 1 or 2, units differ in voltage only. 2. "B-S1" is a specific prototype catalog number while "BE" is a standard catalog number that covers different voltage options.								

2400797-CR-001-R1



UNIT UNDER TEST (UUT)
SUMMARY SHEET

2400797-CR-001-R1



Manufacturer: ACME Electric (a Hubbell Company)								
Model Line: Transformer Product Family								
UUT	Unit Description (mounting)	Report Number (UUT#)	Testing Lab	Year Tested	ISO 17025 Accredited?	S _{DS}	z/h	I _p
1	112kVA 3ph AL Transformer Catalog No: T3112K0013B-S1 (base mounted - rigid)	JID 24-01277 (UUT1)	Clark Testing	2024	Yes	2.0 2.5	1.0 0.0	1.5
2	112kVA 3ph CU Transformer Catalog No: T3112K0013BC-S1 (base mounted - rigid)	JID 24-01277 (UUT2)	Clark Testing	2024	Yes	2.0 2.5	1.0 0.0	1.5
3	300kVA 3ph AL Transformer Catalog No: T3300K0013B-S1 (base mounted - rigid)	JID 24-01277 (UUT3)	Clark Testing	2024	Yes	2.0 2.5	1.0 0.0	1.5
4	300kVA 3ph CU Transformer Catalog No: T3300K0013BC-S1 (base mounted - rigid)	JID 24-01277 (UUT4)	Clark Testing	2024	Yes	2.0 2.5	1.0 0.0	1.5
5	500kVA 3ph AL Transformer Catalog No: T3500K0013B-S1 (base mounted - rigid)	JID 24-01277 (UUT5)	Clark Testing	2024	Yes	2.0 2.5	1.0 0.0	1.5
6	500kVA 3ph CU Transformer Catalog No: T3500K0013BC-S1 (base mounted - rigid)	JID 24-01277 (UUT6)	Clark Testing	2024	Yes	2.0 2.5	1.0 0.0	1.5
Notes:								

UNIT UNDER TEST (UUT)
SUMMARY SHEET

2400797-CR-001-R1



Manufacturer: ACME Electric (a Hubbell Company)							UUT 1		
Model Line: Transformer Product Family									
Model Number: 112kVA 3ph AL Transformer									
Catalog Number: T3112K0013B-S1									
Test Report: JID 24-01277 (UUT1)									
UUT Properties									
Weight (lbs.)	Dimension (in)			Lowest Natural Frequency (Hz)					
	Depth	Width	Height	Front-Back	Side-Side	Vertical			
736	32.0	32.0	36.0	16.82	8.29	>33.33			
UUT Highest Passed Seismic Run Information									
Building Code	Test Criteria	S_{DS}(g)	z/h	I_p	A_{FLX-H}(g)	A_{RIG-H}(g)	A_{FLX-V}(g)	A_{RIG-V}(g)	
CBC 2022	ICC-ES AC156	2.0	1.0	1.5	3.20	2.40	1.67	0.67	
		2.5	0.0						
Product Construction Summary:					Test Mounting Details:				
Carbon Steel Enclosure. 3 Phase. Aluminum wound. NEMA 3R.									
Options/Subcomponent Summary:									
Description		Part Number							
N/A		N/A							
UUT1 was base mounted - rigid using four (4) 1/2"-13 SAE Grade 5 hex bolts, washers and lock washers torqued to 70ft.-lbs. Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test. Contents were included in testing per operating conditions.									

UNIT UNDER TEST (UUT)
SUMMARY SHEET

2400797-CR-001-R1



Manufacturer: ACME Electric (a Hubbell Company)						UUT 2			
Model Line: Transformer Product Family									
Model Number: 112kVA 3ph CU Transformer									
Catalog Number: T3112K0013BC-S1									
Test Report: JID 24-01277 (UUT2)									
UUT Properties									
Weight (lbs.)	Dimension (in)			Lowest Natural Frequency (Hz)					
	Depth	Width	Height	Front-Back	Side-Side	Vertical			
780	32.0	32.0	36.0	27.36	8.89	>33.33			
UUT Highest Passed Seismic Run Information									
Building Code	Test Criteria	S_{DS}(g)	z/h	I_p	A_{FLX-H}(g)	A_{RIG-H}(g)	A_{FLX-V}(g)	A_{RIG-V}(g)	
CBC 2022	ICC-ES AC156	2.0	1.0	1.5	3.20	2.40	1.67	0.67	
		2.5	0.0						
Product Construction Summary:					Test Mounting Details:				
Carbon Steel Enclosure. 3 Phase. Copper wound. NEMA 3R.									
Options/Subcomponent Summary:									
Description	Part Number								
N/A	N/A								
UUT2 was base mounted - rigid using four (4) 1/2"-13 SAE Grade 5 hex bolts, washers and lock washers torqued to 70ft.-lbs. Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test. Contents were included in testing per operating conditions.									

UNIT UNDER TEST (UUT)
SUMMARY SHEET

2400797-CR-001-R1



Manufacturer: ACME Electric (a Hubbell Company)						UUT 3			
Model Line: Transformer Product Family									
Model Number: 300kVA 3ph AL Transformer									
Catalog Number: T3300K0013B-S1									
Test Report: JID 24-01277 (UUT3)									
UUT Properties									
Weight (lbs.)	Dimension (in)			Lowest Natural Frequency (Hz)					
	Depth	Width	Height	Front-Back	Side-Side	Vertical			
1,950	41.0	39.0	46.0	26.40	15.51	>33.33			
UUT Highest Passed Seismic Run Information									
Building Code	Test Criteria	S_{DS}(g)	z/h	I_p	A_{FLX-H}(g)	A_{RIG-H}(g)	A_{FLX-V}(g)	A_{RIG-V}(g)	
CBC 2022	ICC-ES AC156	2.0	1.0	1.5	3.20	2.40	1.67	0.67	
		2.5	0.0						
Product Construction Summary:					Test Mounting Details:				
Carbon Steel Enclosure. 3 Phase. Aluminum wound. NEMA 3R.									
Options/Subcomponent Summary:									
Description	Part Number								
N/A	N/A								
UUT3 was base mounted - rigid using four (4) 1/2"-13 SAE Grade 5 hex bolts, washers, wedge washers and lock washers torqued to 70ft.-lbs. Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test. Contents were included in testing per operating conditions.									

UNIT UNDER TEST (UUT)
SUMMARY SHEET

2400797-CR-001-R1



Manufacturer: ACME Electric (a Hubbell Company)						UUT 4			
Model Line: Transformer Product Family									
Model Number: 300kVA 3ph CU Transformer									
Catalog Number: T3300K0013BC-S1									
Test Report: JID 24-01277 (UUT4)									
UUT Properties									
Weight (lbs.)	Dimension (in)			Lowest Natural Frequency (Hz)					
	Depth	Width	Height	Front-Back	Side-Side	Vertical			
2,148	41.0	39.0	46.0	26.97	15.51	>33.33			
UUT Highest Passed Seismic Run Information									
Building Code	Test Criteria	S_{DS}(g)	z/h	I_p	A_{FLX-H}(g)	A_{RIG-H}(g)	A_{FLX-V}(g)	A_{RIG-V}(g)	
CBC 2022	ICC-ES AC156	2.0	1.0	1.5	3.20	2.40	1.67	0.67	
		2.5	0.0						
Product Construction Summary:					Test Mounting Details:				
Carbon Steel Enclosure. 3 Phase. Copper wound. NEMA 3R.					 <p>UUT4 was base mounted - rigid using four (4) 1/2"-13 SAE Grade 5 hex bolts, washers, wedge washers and lock washers torqued to 70ft.-lbs. Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test. Contents were included in testing per operating conditions.</p>				
Options/Subcomponent Summary:									
Description		Part Number							
N/A		N/A							

UNIT UNDER TEST (UUT)
SUMMARY SHEET

2400797-CR-001-R1



Manufacturer: ACME Electric (a Hubbell Company)						UUT 5			
Model Line: Transformer Product Family									
Model Number: 500kVA 3ph AL Transformer									
Catalog Number: T3500K0013B-S1						Test Report: JID 24-01277 (UUT5)			
UUT Properties									
Weight (lbs.)	Dimension (in)			Lowest Natural Frequency (Hz)					
	Depth	Width	Height	Front-Back	Side-Side	Vertical			
3,088	48.0	45.0	58.0	25.52	19.03	26.36			
UUT Highest Passed Seismic Run Information									
Building Code	Test Criteria	S_{DS}(g)	z/h	I_p	A_{FLX-H}(g)	A_{RIG-H}(g)	A_{FLX-V}(g)	A_{RIG-V}(g)	
CBC 2022	ICC-ES AC156	2.0	1.0	1.5	3.20	2.40	1.67	0.67	
		2.5	0.0						
Product Construction Summary:					Test Mounting Details:				
Carbon Steel Enclosure. 3 Phase. Aluminum wound. NEMA 3R.									
Options/Subcomponent Summary:									
Description		Part Number							
N/A		N/A							
UUT5 was base mounted - rigid using four (4) 1/2"-13 SAE Grade 5 hex bolts, washers, wedge washers and lock washers torqued to 70ft.-lbs. Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test. Contents were included in testing per operating conditions.									

UNIT UNDER TEST (UUT)
SUMMARY SHEET

2400797-CR-001-R1



Manufacturer: ACME Electric (a Hubbell Company)							UUT 6			
Model Line: Transformer Product Family										
Model Number: 500kVA 3ph CU Transformer										
Catalog Number: T3500K0013BC-S1										
Test Report: JID 24-01277 (UUT6)										
UUT Properties										
Weight (lbs.)	Dimension (in)			Lowest Natural Frequency (Hz)						
	Depth	Width	Height	Front-Back	Side-Side	Vertical				
3,362	48.0	45.0	58.0	17.15	8.29	32.61				
UUT Highest Passed Seismic Run Information										
Building Code	Test Criteria	S_{DS}(g)	z/h	I_P	A_{FLX-H}(g)	A_{RIG-H}(g)	A_{FLX-V}(g)	A_{RIG-V}(g)		
CBC 2022	ICC-ES AC156	2.0	1.0	1.5	3.20	2.40	1.67	0.67		
		2.5	0.0							
Product Construction Summary:					Test Mounting Details:					
Carbon Steel Enclosure. 3 Phase. Copper wound. NEMA 3R.										
Options/Subcomponent Summary:										
Description		Part Number								
N/A		N/A								
UUT6 was base mounted - rigid using four (4) 1/2"-13 SAE Grade 5 hex bolts, washers, wedge washers and lock washers torqued to 70ft.-lbs. Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test. Contents were included in testing per operating conditions.										