



**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-0129

HCAI Special Seismic Certification Preapproval (OSP)

Type: New Renewal

Manufacturer Information

Manufacturer: YoungTouchstone

Manufacturer's Technical Representative: Vicki Piazza

Mailing Address: 200 Smith Lane, Jackson, TN 38308

Telephone: (414) 768-7429 Email: vpiazza@wabtec.com

Product Information

Product Name: HB Radiators (Horizontal Core)

Product Model Number(s): HB-24 and HB-84

Product Category: Emergency and Standby Power Systems

Product Sub-Category: Remote Radiators

General Description: Stand alone external radiators for diesel powered gensets.

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: Pre Compliance

Contact Person: Katie Braman

Mailing Address: 36 SW Wall St, Bend, OR 97702

Telephone: (541) 241-2310 Email: katie@go-pre.com

Title: Principal & Program Manager





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

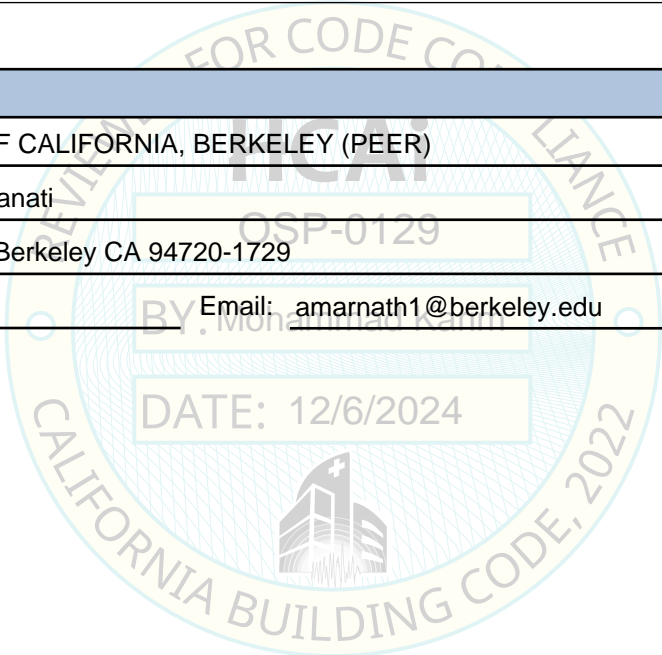
Company Name: PRE COMPLIANCE
Name: Andrew Coughlin California License Number: S6082
Mailing Address: 36 SW Wall Street, Bend, OR 97702
Telephone: (415) 635-8461 Email: Andy@go-pre.com

Certification Method

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

Testing Laboratory

Company Name: UNIVERSITY OF CALIFORNIA, BERKELEY (PEER)
Contact Person: Amarnath Kasalanati
Mailing Address: 325 Davis Hall, Berkeley CA 94720-1729
Telephone: (510) 642-3437 Email: amarnath1@berkeley.edu





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Seismic Parameters

Design Basis of Equipment or Components (F_p/W_p) = 1.53

SDS (Design spectral response acceleration at short period, g) = 2.13 at z/h = 1

a_p (Amplification factor) = 1.0

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

Natural frequencies (Hz) = See Attachment

Overall dimensions and weight = See Attachment

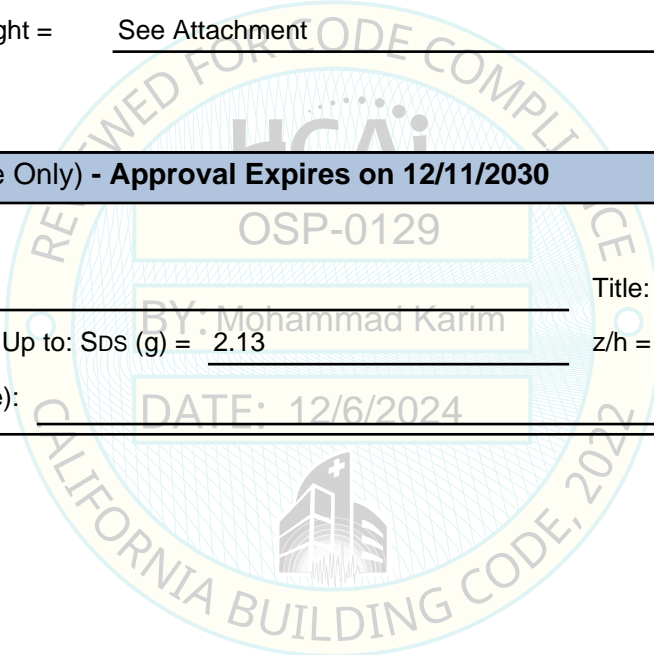
HCAI Approval (For Office Use Only) - Approval Expires on 12/11/2030

Date: 12/6/2024

Name: Mohammad Karim Title: Supervisor, Health Facilities

Special Seismic Certification Valid Up to: SDS (g) = 2.13 z/h = 1

Condition of Approval (if applicable): DATE: 12/6/2024



UUT 1

Test Report# UC Bekeley PEER-STL_2010-11 Young
Tochstone HB Radiators

Manufacturer: Wabtec Corporation, LLC
Model Line: HB Series Radiators
Model Number: HB-24
Serial Number: 2980016

Highest Passed Test Level						
S _{DS}	z/h	I _p	A _{flx-h}	A _{rig-h}	A _{flx-v}	A _{rig-v}
2.13	1 0	1.5	3.41	2.56	1.43	0.58

Dimensions/Weights			
Depth (in)	Width (in)	Height (in)	Weight (lbs.)
78	68	106	4,524

Lowest Natural Frequency (Hz)		
Front-Back	Side-Side	Vertical
10.00	20.0	9.96

Building Codes	Test Criteria	Construction/Option Summary
CBC 2022	ICC-ES AC156	Carbon steel with standard bracing.

UUT Mounting Details:



UUT was mounted to the shake table with six (6) Grade 8 5/8" bolts.

Unit maintained structural integrity and remained operational per manufacturer requirement following shake table test. All contents were included in the unit per operating conditions.

List of Included Subcomponents

Description	Model Number
Multi-Wing Fan	54/8-8/32/PAG/9W2R
GE 3 Hp Motor - Frame 182T	YT50869-33

UUT 2

Test Report# UC Bekeley PEER-STL_2010-11 Young
Tochstone HB Radiators

Manufacturer: Wabtec Corporation, LLC
Model Line: HB Series Radiators
Model Number: HB-84
Serial Number: 2980089

Highest Passed Test Level						
S _{DS}	z/h	I _p	A _{flx-h}	A _{rig-h}	A _{flx-v}	A _{rig-v}
2.13	1 0	1.5	3.41	2.56	1.43	0.58

Dimensions/Weights			
Depth (in)	Width (in)	Height (in)	Weight (lbs.)
133	120	125	12,400

Lowest Natural Frequency (Hz)		
Front-Back	Side-Side	Vertical
4.0	7.7	14.6

Building Codes	Test Criteria	Construction/Option Summary
CBC 2022	ICC-ES AC156	Carbon steel with enhanced seismic bracing.

UUT Mounting Details:



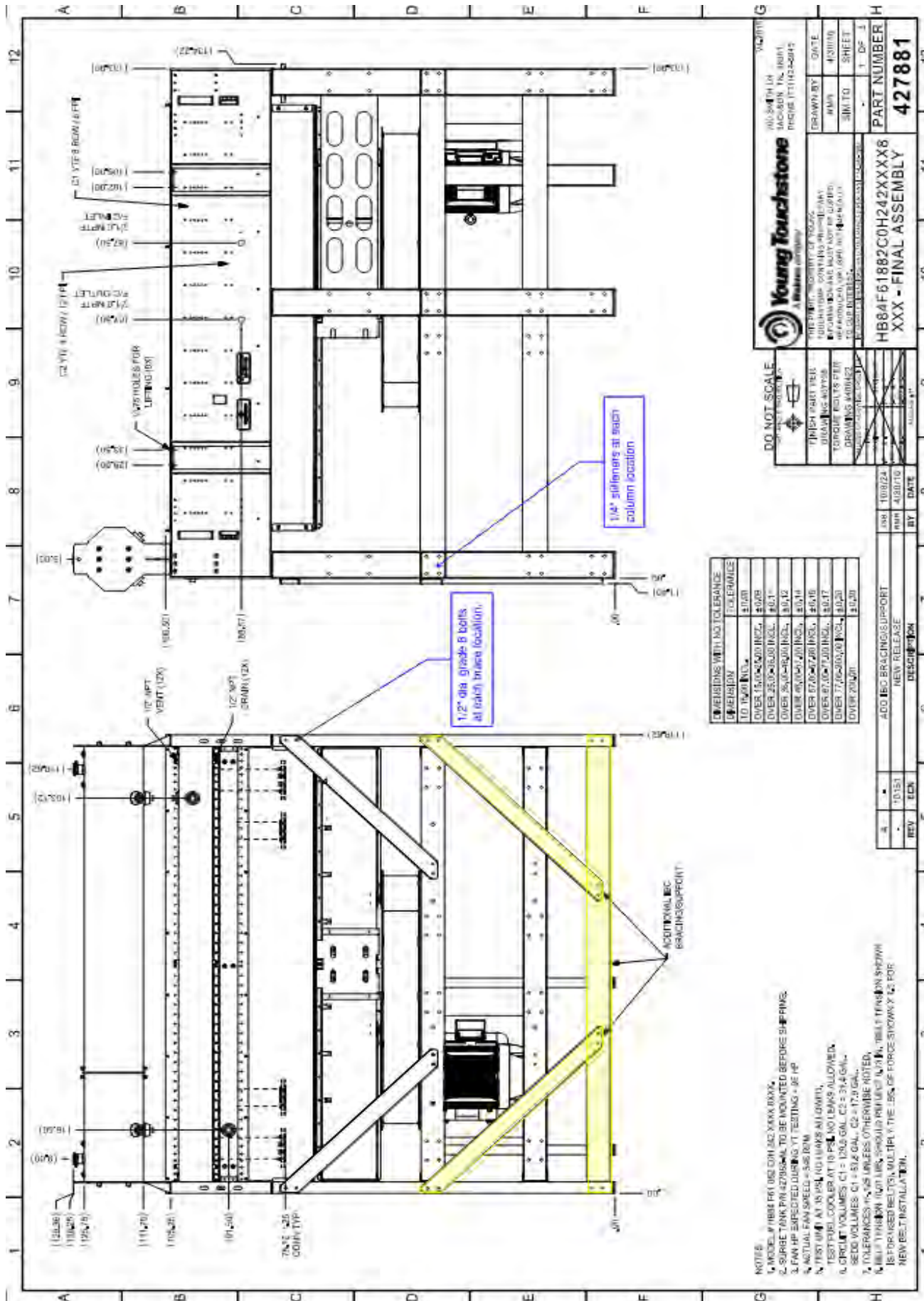
UUT was mounted to the shake table with six (6) Grade 8 5/8" bolts. Unit maintained structural integrity and remained operational per manufacturer requirement following shake table test. All contents were included in the unit per operating conditions.

See the following page for drawing of seismic enhancement details.

List of Included Subcomponents

Description	Model Number
WACO Fan	17P 10-108-WHISPR RP22
GE 100HP Motor - Frame 405T	YT50869-14

Seismic Braces



Young Touchstone
A Business Company

110 SOUTH LINCOLN
JACKSON, TN, 38243
PHONE: (771) 423-8843

DRAWN BY	DATE
ISSUED BY	ISSUING
APPROVED BY	DATE
PROJECT NO.	SHEET NO.
TOTAL SHEETS	

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DO NOT SCALE

FINISH PARTS LIST
DRAWING NUMBER
CONTRACT NUMBER
PROJECT NAME
DRAWING ADDRESS

PART NUMBER
427881

HB84F61882C0H242XX XX8
XXX - FINAL ASSEMBLY

DIMENSIONS WITH NO TOLERANCE

DESCRIPTION	TOLERANCE
OVER 1/4" MIN.	±0.00
OVER 1/4" TO 1/2" INCL.	±0.01
OVER 1/2" TO 1" INCL.	±0.02
OVER 1" TO 2" INCL.	±0.04
OVER 2" TO 4" INCL.	±0.06
OVER 4" TO 6" INCL.	±0.08
OVER 6" TO 12" INCL.	±0.12
OVER 12" TO 24" INCL.	±0.15
OVER 24" TO 48" INCL.	±0.20
OVER 48" TO 96" INCL.	±0.25

REV	ECD	DATE	DESCRIPTION
1		10/15/11	ADD 160 BRACING SUPPORT
2		10/15/11	REV RELEASE

- NOTE:**
1. MODEL # HB84F61882C0H242XX XX8.
 2. SURGE TANK PRIOR TO INSTALLATION TO BE MOUNTED BEFORE SUPPORTS.
 3. FAN HP EXCEEDED DURING VT TESTING - 36 HP.
 4. ACTUAL FAN SPEED - 535 RPM.
 5. TEST UNIT AT 15 GAL. (10 LITERS) ALLOWED.
 6. TEST FUEL COOLER AT 10 PSI. NO LEAKS ALLOWED.
 7. CIRCUIT VOLUMES: C1 = 120.5 GAL., C2 = 31.4 GAL.
 8. BEDD VOLUMES: C1 = 51.2 GAL., C2 = 17.9 GAL.
 9. TOLERANCES AS UNLESS OTHERWISE NOTED.
 10. ALL DIMENSIONS UNLESS OTHERWISE SPECIFIED IN THIS DRAWING SHALL BE IN INCHES.
 11. ALL DIMENSIONS SHOWN ARE FOR THE BELT POSITION. MULTIPLE BELT POSITIONS ARE ALLOWED FOR FORCE SLOWLY & FOR NEW BELT INSTALLATION.

Seismic braces shown in yellow.