

DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION FACILITIES DEVELOPMENT DIVISION

OFFICE USE ONLY APPLICATION FOR HCAI SPECIAL SEISMIC **CERTIFICATION PREAPPROVAL (OSP)** APPLICATION #: OSP-0130 **HCAI Special Seismic Certification Preapproval (OSP)** Type: New Renewal **Manufacturer Information** Manufacturer: Young Touchstone, a Wabtec Company Manufacturer's Technical Representative: Vicki Piazza Mailing Address: 200 Smith Lane, Jackson, TN 38301 Telephone: (414) 768-7420 Email: vpiazza@wabtec.com **Product Information** Product Name: Emergency and Standby Power Systems Product Type: Remote Radiators Product Model Number: Remote Charge Air Coolers 1.5 Square Feet thru 8 Square Feet General Description: Units are remote mounted charge air coolers (also called intercoolers or aftercoolers) for turbocharged diesel powered gensets. Mounting Description: Vertical and Horizontal Core, base mounted-rigid, -None Tested Seismic Enhancements: **Applicant Information** Applicant Company Name: TRU Compliance, by Structural Integrity Associates, Inc. Contact Person: Katie Braman Mailing Address: 5215 Hellyer Ave. Suite 210, San Jose, CA 95138

Title: Program Manager, TRU Compliance

Telephone: (541) 639-2194





STATE OF CALIFORNIA - HEALTH AND HUMAN SERVICES AGENCY

Email: kbraman@structint.com



DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION FACILITIES DEVELOPMENT DIVISION

California Licensed Structural Engineer Responsible for the Engineering and Test Report(s)
Company Name: STRUCTURAL INTEGRITY ASSOCIATES, INC.
Name: Andrew Coughlin California License Number: S6082
Mailing Address: 5215 Hellyer Ave, Suite 101, San Jose, CA 95138-1025
Telephone: (415) 635-8461 Email: acoughlin@structint.com
Certification Method
GR-63-Core X ICC-ES AC156 IEEE 344 IEEE 693 NEBS 3
Other (Please Specify):
FOR CODE CO
Testing Laboratory
Company Name: Pacific Earthquake Engineering Research Center (PEER)
Contact Person: Amarnath Kasalanati
Mailing Address: 1301 South 46th St., Bldg. 420, Richmond CA 94720-1729
Telephone: (510) 642-3437 Email: Amarnath1@berkeley.edu
O DATE: 12/01/2022







12/01/2022 OSP-0130 Page 2 of 14



DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION FACILITIES DEVELOPMENT DIVISION

Seismic Parameters	
Design Basis of Equipment or Components	(Fp/Wp) = 1.44
Sps (Design spectral response accele	eration at short period, g) = 2.00
ap (Amplification factor) =	1.0
Rp (Response modification factor) =	2.5
Ω_0 (System overstrength factor) =	2.0
Ip (Importance factor) =	1.5
z/h (Height ratio factor) =	1
Natural frequencies (Hz) =	See Attachment
Overall dimensions and weight =	See Attachment

HCAI A	pproval (For Office Use Only) - Approval Expires on 12/01/2028	3 %	
Date:	12/1/2022 OSP-0130	12	
Name:	Mohammad Karim	Title:	Supervisor, Health Facilities
Special	Seismic Certification Valid Up to: Sps (g) = 2.00	z/h =	1
Conditio	on of Approval (if applicable): DATE: 12/01/2022	Vo	





12/01/2022 OSP-0130 Page 3 of 14

SPECIAL SEISMIC CERTIFICATION CERTIFIED COMPONENT MATRIX





Manufacturer:	Young Touchstone, a Wabtec Company	TABLE 1
Model Line:	Remote CAC	IMPLET

Certified Product Construction Summary:

Carbon steel frame, Copper fin charge air core (ABT), Mechanical bond core header

Certified Options Summary:

Vertical Core 1.5 ft² to 8.0 ft² range

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 2022 Seismic Certification Limits: $S_{DS} = 2.0 \text{ g} \quad \text{z/h=1.0}$ $S_{DS} = 2.0 \text{ g} \quad \text{z/h=0.0}$ $I_{P} = 1.5$

Model Line	Model	Unit Size (ft²)	Weight (lb)	Notes	UUT
	15A <mark>17084</mark>	BY: M &5 amma	d Kari ³⁷⁰		1a
	20A <mark>1708</mark> 4	2.0	440		Interp
DCAC	25A <mark>17084</mark>	DATE 3.0 12/01	480		Interp
RCAC (Vertical Water	30A1 <mark>7084</mark>	$2A + E_{3.0} + 2/0 +$	510	/	Interp
Connections)	40A17084	4.0	650	7	Interp
	50A17084	5.0	900		Interp
	50A17168	5.0	1,200		Interp
	80A17168	8.0	1,700		2a

SPECIAL SEISMIC CERTIFICATION CERTIFIED COMPONENT MATRIX





Manufacturer:	Young Touchstone, a Wabtec Company	TABLE 2
Madallina	Demote CAC	IADLEZ

Certified Product Construction Summary:

Carbon steel frame, Copper fin charge air core (ABT), Mechanical bond core header

Certified Options Summary:

Horizontal Core 1.5 ft² to 8.0 ft² range

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 2022 Seismic Certification Limits: $S_{DS} = 2.0 \text{ g} \quad \text{z/h=1.0}$ $S_{DS} = 2.0 \text{ g} \quad \text{z/h=0.0}$ $I_{P} = 1.5$

Model Line	Model	Unit Size (ft²)	Weight (lb)	Notes	UUT
	15A <mark>1</mark> 7084	BY: M&famma	d Kari ³⁷⁰		1b
	20A <mark>17084</mark>	2.0	440		Interp.
DCAC	25A <mark>17084</mark>	DATE 3.0 12/01	480		Interp.
RCAC	30A1 <mark>7084</mark>	JA 1 L _{3.0} 12/01	510		Interp.
(Horizontal Water Connections)	40A17 <mark>084</mark>	4.0	650		Interp.
Connections	50A17084	5.0	900		Interp.
	50A17168	5.0	1,200		Interp.
	80A17168	8.0	1,700		2b
		BOILDI	No		

1800975-CR-001-R4



Manuf	acturer: Young Touchst	one, a Wabtec Compan	У					
Model	Line: Remote CAC							
UUT	Unit Description (Mounting)	Report Number (UUT #)	Testing Lab	Year Tested	ISO 17025 Accredited?	S _{DS}	z/h	I _P
1a	1.5 ft ² CAC, vertical core, (leg mount non-isolated)	PEER -STI 2010-12	Pacific Earthquake Engineering Research Center (PEER)	2010	No ¹	2.0	1.0	1.5
1b	1.5 ft ² CAC, horizontal core, (leg mount non-isolated)	PEER -STI 2010-12	Pacific Earthquake Engineering Research Center (PEER)	2010	No ¹	2.0	1.0	1.5
2a	8 ft ² CAC, vertical core, (base mount non-isolated)	PEER -STI 2010-12	Pacific Earthquake Engineering Research Center (PEER)	2010	No ¹	2.0	1.0	1.5
2b	8 ft ² CAC, horizontal core, (base mount non-isolated)	PEER -STI 2010-12	Pacific Earthquake Engineering Research Center (PEER)	2010	No ¹	2.0	1.0	1.5
		BY: Moha	mmad Karim	0				
	ĺ	DATE: 1	2/01/2022	079				
		OPNIA	E COD	- >				
		BUI	LDING					

Notes:

1. PEER was not ISO 17025 accredited at the time of testing but has been reviewed by TRU Compliance and found to meet the requirements for ICC-ES AC156 testing. Review form is on file with TRU Compliance.

1800975-CR-001-R4



UUT 1a

Manufacturer: Young Touchstone, a Wabtec Company

Model Line: Remote CAC
Model Number: RCAC15A17084

Serial Number: 2979113

Product Construction Summary:

Carbon steel frame, horizontal arrangement, copper fin core

Options/Subcomponent Summary:

Leg mounted to frame, 1.5 ft² size, vertical core, non-isolated mount

			UUT Pro	perties		7				
Weight		Dimension (in)\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	vv(XXX)+xXXXXX	Lowest Natural Frequency (Hz)					
(lb)	Depth	Width	Width S Height 30 Front-Back		Side	-Side	Ver	tical		
370	26.3	33.5	33.5		N/A		33.0		N/A	
		UUT Highe	st Passed Se	ismic Run	Informa	tion				
Building Code		Test Crit	eria	S _{DS} (g)	z/h	I _P	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g
СВС	2022	ICC-ES AC	C156 12/(1/2.002	2 1.0	1.5	3.20	2.40	1.33	0.53

Test Mounting Details:



UUT1a was mounted to I-beams with twelve (12) 1/2" A307 bolts¹. The I-beams were mounted to the GENSET rail with eight (8) 1/2" A307 bolts and the GENSET rail was mounted to the shake table with eight (8) 1/2" A307 bolts.

Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test. Contents were included in testing per operating conditions.

1800975-CR-001-R4



Manufacturer: Young Touchstone, a Wabtec Company **UUT 1a Model Line:** Remote CAC Model Number: RCAC15A17084 Serial Number: 2979113 **Drawing with Mounting Details:** REVISIONS REL BY DESCRIPTION DATE A INITIAL RELEASE NO. 8-3-10 JLG
B COMPONENT CALLOUT & T-BLK UPDATE 11-11-10 WMW . O ∏ (SEAL HSS 3X3X3M6 CHARGE 0 AIR 5/8 of HOLE FOR 04 Ø_{1/41}√HSS TO PLATE -5X8 PLATEXE C'STD GAGE C HSS 8X6X1/2 RALSIMULATION GENEET 1/4 L 4X4X1/2 NOTES: 1. ALL DIMENSIONS ARE IN INCHES. IN BRACKETS ARE FOR REFERENCE ONLY, ALL TOLERANCES ARE TO BE REFERENCED FROM DECIMAL REQUIREMENTS 1 OF 1 SCALE: NONE YOUNG TOUCHSTONE 1.5 SQFT AFPROVALS PER REVISION BLOCK UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
1 PLACE DECIMAL= ±.08
2 PLACE DECIMAL= ±.03
3 PLACE DECIMAL= ±.01
ANGULAR= ±.030'
FRACTIONS= ± 1/16
BREAK SHARP CORNERS R=.005 MAX APPLICATION NOTICE IS HEREITY GIVEN THAT FOXEPY AS OTHERWISE AGREED IN WILLIAMS THE INFORMATION AND DESIGN ENGAGED IN THE DOCUMENT IS A CONTRIBUTION AND DESIGN ENGAGED IN THE DOCUMENT IS A CONTRIBUTION, PROPRIETTANT DESIGN OR IS PART OF A CONTRIBUTION FOR THE YIMPORT OF SOME AND THE RECEIVED HER PACKET OF THE YIMPORT INTERPRET IAW VISCMA A-SD-S-V15N

1800975-CR-001-R4



Manufacturer: Young Touchstone, a Wabtec Company

Model Line: Remote CAC
Model Number: RCAC15A17084

UUT 1b

Product Construction Summary:

Carbon steel frame, horizontal arrangement, copper fin core

Options/Subcomponent Summary:

Base mounted, 1.5 ft² size, horizontal core, non-isolated mount

			UUT Pi	roperties		9						
Weight		Dimension (in	1) Mad Massa	(4,477), , , , , , , , , , , , , , , , , , ,	Lowest Natural Frequency (Hz)							
(lb)	Depth	Width	Width OS Height 30 Front-Back		OS Height 30		Side	-Side	Ver	tical		
370	26.3	33.5	//// ///// 2	22.2		9.0		9.0 N/A		/A	N	/A
		UUT Highe	st Passed S	eismic Run	Informa	tion						
Building Code Test Criteri CBC 2022 ICC-ES AC15		teria	S _{DS} (g)	z/h	I _P	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)			
		ICC-ES A	ICC-ES AC156 12/(2 1.0	1.5	3.20	2.40	1.33	0.53		

Serial Number:

2979113

Test Mounting Details:



UUT1b was mounted to I-beams with six (6) 1/2" A307 bolts¹. The GENSET rail was mounted to the shake table with eight (8)1/2" A307 bolts.

Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test. Contents were included in testing per operating conditions.

1800975-CR-001-R4



Manufacturer: Young Touchstone, a Wabtec Company

Model Line: Remote CAC

UUT 1b

Model Number: RCAC15A17084 Serial Number: 2979113 **Drawing with Mounting Details:** REV. DESCRIPTION INITIAL RELEASE JGL B COMPONENT CALLOUT & T-BLK UPDATE 11-11-10 WMW BRACKET (2PLACES) CHARGED AIR COOLER UNIT MOUNTING Mohammad Karim 4 BOLTS€ STO GAGE & 3"cc(TYP OF 4) HSS 10 X 8-1/2 ANG 4 X 4 X 5/8 TYP RAIL (E) 3/4 PLATE THREAD & TAP PLATE ON SITE DING CO X-1 NOTES: 1. ALL DIMENSIONS ARE IN INCHES. DIMENSIONS IN BRACKETS ARE FOR REFERENCE ONLY, ALL TOLERANCES ARE TO BE REFERENCED FROM DECIMAL REQUI 1 OF 1 YOUNG TOUCHSTONE SOFT / 15 SOFT UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 1 PLACE DEDMAL = ±.06 2 PLACE DEDMAL = ±.03 3 PLACE DEDMAL = ±.01 ANGULAR = ±0.30 FRACTIONS = ± 1/16 BREAK SHAPP CORNERS R=.005 MAX THE DAILS NO STREET THE VMC GROUP ^{0€}4U931 nomingdale, NJ 0741 Houston, TX 77041 Mombe, A-SD- H8015N WASCMA

1800975-CR-001-R4



UUT 2a

Manufacturer: Young Touchstone, a Wabtec Company

Model Line: Remote CAC
Model Number: RCAC80A17168

Serial Number: 2979067

Product Construction Summary:

Carbon steel frame, horizontal arrangement, copper fin core

Options/Subcomponent Summary:

Leg mounted to frame, 8 ft² size, vertical core, non-isolated mount

			UUT Pro	perties		7				
Weight		Dimension (in)\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	,,/////x,//,,//////	Lowest Natural Frequency (Hz)					
(lb)	Depth	Width Sheight 30 Front-Back		Height 30 Front-Back Side-Side		Back Side-Side		Ver	tical	
1,700	44.2	55.9).3	29.0		19.0		10.0		
		UUT Highe	st Passed Se	ismic Run	Informa	tion				
Building Code		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)
СВС	2022	ICC-ES AC	C156 12/(1/2.002	2 1.0	1.5	3.20	2.40	1.33	0.53

Test Mounting Details:



UUT2a was mounted to I-beams with twelve (12) 1/2" A307 bolts¹. The I-beams were mounted to the GENSET rail with eight (8) 1/2" A307 bolts and the GENSET rail was mounted to the shake table with eight (8)1/2" A307 bolts.

Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test. Contents were included in testing per operating conditions.

1800975-CR-001-R4



Manufacturer: Young Touchstone, a Wabtec Company **UUT 2a Model Line:** Remote CAC **Model Number:** RCAC80A17168 Serial Number: 2979067 **Drawing with Mounting Details:** REVISIONS DESCRIPTION REL 6Y REV. 6438 INITIAL RELEASE 8/36/10 JJG Α COMPONENT CALLOUT & T-DEK UPDATE 11-11-10 VANAVA CAP PLATE BRACKET 1/8X3X3 **SEAL** 562 DIA. HOLE FOR 1/2 DIA, A397 BOLT HSS 3X3X3/16 (TYP 4X) MOUNTAIN CHATE TO PLATE 2-1/2 4 BOLES PLIZX5X9 W 2-6 9 BOLTS & GICK & MISSING GAGE C 4'CL & 51P GAGE @ RAIL å BEAM STIFFENERS (TYP.3/x) 2 DIA, ACCESS HOLE HSS 10X8X1/2 (OPP. SIDE) ANGLE 4X4X5/8 (4) PER TUBE (E) 3/4 PLATE 1MD≺3 SIDES FRONT VIEW DIMENSIONS IN BRACKETS ARE FOR REPORTING ONLY, ALL TOLL DANCES ARE TO BE REPORTING DISCOMMENDING. REQUIREMENTS NOTES: 1. ALL DIMENSIONS ARE 'N INCHES. PART NUMBER TOUCHSTONE YOUNG 1 OF 1 SCALE: NONE 8 SQ FT APPROVALS PER REVISION SLOCK UNLESS OTHERWISE SPECIMED
COMPRISONS ARE IN INCHES
TOLERANCES ARE
1 PLACE DECIMAL ±.03
2 PLACE DECIMAL ±.03
3 PLACE DECIMAL ±.01
ANGULAR ±.030'
FRACTIONS ± 1./18
BREAK SHARP CORNERS R=.005 MAX APPLICATION NOTICE IS NOTICE GIVEN THAT DOCUMENT A CHIEFWISH JUSTICO MI WARTING THE PRINSWATION AND CHOICE REMOTE BUTTES DOTINGET IS A CHIEFWISHAM, PRODUCTIAN PORTION OR SHAFT OR CHIEFWISH IN PROPRIETAND COURSE OF THE TREPORTION OF THE WAR FRANK IT IS SERVITTED WHOM A CHIEFWISH FLATHFRICK FOR A SPECIFIC THRESHOLD AND THE RECORDING OF ANY FOR THE SPECIFIC FOR SPECIFIC THRESHOLD AND THE RECORDING OF ANY FORTION THE SERVICE OF THE REMOTE THRESHOLD PROPERLY OF THE CHIEFWISH ME OF THE REMOTE THRESHOLD PROPERLY OF THE PROPERTY OF THE ORSERS. SHERPRET LAW ⊕€ AGE CODE 4U931 A-SD-V80N VIS€MR

1800975-CR-001-R4



UUT 2b

Manufacturer: Young Touchstone, a Wabtec Company

RCAC80A17168

Model Line: Remote CAC

Serial Number: 2979067

Product Construction Summary:

Model Number:

Carbon steel frame, horizontal arrangement, copper fin core

Options/Subcomponent Summary:

Base mounted, 8 ft² size, horizontal core, non-isolated mount

					XXX					
			UUT P	roperties		7				
Weight		Dimension (in	JhaMedMae		Lowest Natural Frequency (Hz)					
(lb)	Depth	oth Width Sheight 30 Front		Front-Back		-Side	Vertical			
1,700	44.2	55.9	40.3	9.0		20.6		31.0		
		UUT Highe	st Passed S	eismic Run	Informa	tion				
Buildi	ing Code	Test Crit	eria	S _{DS} (g)	z/h	I _P	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)
СВО	CBC 2022		D3 (O/		2 1.0	1.5	3.20	2.40	1.33	0.53

Test Mounting Details:



UUT2b was mounted to I-beams with eight (8) 1/2" A307 bolts¹. The GENSET rail was mounted to the shake table with eight (8)1/2" A307 bolts.

Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test. Contents were included in testing per operating conditions.

1800975-CR-001-R4



Manufacturer: Young Touchstone, a Wabtec Company **UUT 2b Model Line:** Remote CAC Model Number: RCAC80A17168 Serial Number: 2979067 **Drawing with Mounting Details:** REVISIONS DESCRIPTION Α INITIAL RELEASE 8-9-10 JGL COMPONENT CALLOUT & T-BLK UPDAT BRACKET (2PLACES) CHARGED AIR COOLER MOUNTING Mohammad Karim 4 BOLTS€ STO GAGE & 3"cc [TYP of 4] H5S 10 X 8-1/2 2445 X 19 ANG 4 X 4 X 5/8 TYP GENSET (E) 3/4 PLATE THREAD & TAP PLATE ON SITE X-1 NOTES: 1. ALL DIMENSIONS ARE IN INCHES. IS IN BRACKETS ARE FOR REFERENCE ONLY, ALL TOLERANCES ARE TO BE REFERENCED FROM DECIMAL RE YOUNG TOUCHSTONE 8 SOFT / 1.5 SOFT UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ARE
1 PLACE DECIMAL = ±.06
2 PLACE DECIMAL = ±.03
3 PLACE DECIMAL = ±.01
ANDULAR = ±0°30°
FRACTIONS = ± 1/16
BREAK SHAFF CORNERS R=.005 MAX NOTICE IS MERREY GIVEN THAT EXCEPT AS OTHERWISE AGREED BY WEITING THE BYCOMBATION AND DESIGN DUDOLDED IN THIS DOCUMENT IS A CONFEDENTIAL PROPRIETATION SCHOOL OF PARTY OF A CONFEDENTIAL PROPRIETATION SCHOOL OF PARTY OF THE VAL CONFEDENTIAL PROPRIETATION OFFICE AND IS TO BE PROPRIETY OF THE VAL CONFEDENTIAL PROPRIETOR OFFICE AND IN THE RECEIPT OF ACCOUNT THE VALCOUS AND THE RECEIPT OF ACCOUNT THE SAME AND AND AND AND ADDRESS OF THE VALCOUS AND THE RECEIPT OF ACCOUNT THE VALCOUS AND THE RECEIPT OF ACCOUNT OF THE VALCOUS AND ANSI Y14 The Power of Togethe loomingstale, NJ 074 Houston, TX 77041 4U931

A-SD- H8015N

W-VASCAMA