

0518148

Contractor Information											
Contractor Name		Address		City		Zip		Phone		Fax	
Torelli Electric, Heating and Air Conditioning		POBOX 292574		Sacramento, Ca.		95829		916-682-1001		916-682-1012	
Company Contact		Est Complete		Job Number		Permit Number		License #		Company ID #	
Gary Tonarelli						518148		698232		20047	
Residential Project Information											
Owner's Name/ Project Title		Address		City		Zip		Phone		Fax/ email	
Connie Turner		5611 Milner Wy		Sacramento, Ca.		95822		424-8558			
County		Bid Dept - Permit From		Utility		Plan #		Group #		House #	
Sacto		city		smud		20047				1001	
Building Information											
# of Dwellings		Front Orientation (N,S,E,W)		W		Heat Load		Cool Load		BTUs	
Multi Family		1									
Single Family		x		Number of Stories		1		Duct Location		attic	
Addition-new rm		x		Conditioned Floor Area		1800		SF			
Alteration-change		x		Maximum Ceiling Height		8ft		Ft		Duct -R value	
Package Unit		Gas / Electric		AFUE		0.80		SEER		Heat: BTU Input	
Split System		Heat Pump		HSPF				EER		Cooling: BTUs	
Heat System Mfg		Frigidare		Condenser Sys Mfg						Coil System Mfg	
Model #		R4GC-042K072X		Model #						Model #	
Serial #				Serial #						Serial #	

Title 24 requirements - contractor and HERS verification check list

CF6R forms on job site	_____	Duct System - New or Exist	_____
Furnace Mfg and model # documented	_____	CFM Leakage	_____
Furnace serial # documented	_____	Leakage pressure	_____
Coil Mfg and model # documented	_____	Equipment air flow in CFM	_____
Coil serial # documented	_____	System % leakage	_____
Condenser Mfg and model # documented	_____	Test Date	_____
Condenser serial # documented	_____	ARI #	_____
TXV verified on split system	_____	Notes:	_____
High EER verified on options	_____		_____
Air distribution system fully ducted	_____		_____
Existing duct tape has draw bands and mastic	_____		_____
All Supply registers sealed for test	_____		_____
All Return grilles sealed for test	_____		_____
Duct blaster w/ rings installed correctly	_____		_____
Smoke required to pass test	_____		_____
All register & grille seals removed	_____		_____
		Signature	_____

5611 Milner Wy

Sacramento, Ca. CA 95822

518148

Site Address

Permit Number

An installation certificate is required to be posted at the building site or made available for all appropriate inspections. (The information provided on this form is required) After completion of final inspection, a copy must be provided to the building department (upon request) and the building owner at occupancy, per Section 10-103(a).

HVAC SYSTEMS:

Heating Equipment

Equip Typ (pkg. heat pump)	CEC Certified Mfr. Name, Model and Serial Number	# of Identical Systems	Efficiency (AFUE, etc.) ¹ >(CF-1R value)	Duct Location (attic, etc.)	Duct or Piping R-value	Heating Load (Btu/hr)	Heating Capacity (Btu/hr)
Package	Frigidare	1	0.80 AFUE	attic	R4	0	72000
	R4GC-042K072X		0 HSPF				
G/E	0						

Cooling Equipment

Equip Typ (pkg. heat pump)	CEC Certified Mfr. Name, Model and Serial Number	# of Identical Systems	Efficiency (AFUE, etc.) ¹ >(CF-1R value)	Duct Location (attic, etc.)	Duct or Piping R-value	Cooling Load (Btu/hr)	Cooling Capacity (Btu/hr)
Package	0	1	12.00 SEER	attic	R4	0	42000
	0		0 EER				
G/E	0						
	0						
Coil	0						
	0						

1. > symbol reads greater than or equal to what is indicated on the CF-1R value.

Include both SEER and EER if compliance credit for high EER air conditioner is claimed.

I, the undersigned, verify that equipment listed above is: 1) is the actual equipment installed, 2) equivalent to or more efficient than that specified in the certificate of compliance (Form CF-1R) submitted for compliance with the Energy Efficiency Standards for residential buildings, and 3) equipment that meets or exceeds the appropriate requirements for manufactured devices (from the Appliance Efficiency Regulations or Part 6), where applicable.

Mary Tonarelli 1-17-06
Signature, Date

Tonarelli Electric, Heating and Air Conditioning

Installing Subcontractor (Co. Name)

OR General Contractor (Co. Name) OR Owner

COPY TO: Building Department
HERS Rater (if applicable)
Building Owner at Occupancy

5611 Milner Wy

Sacramento, Ca. CA 95822

518148

Site Address

Permit Number

INSTALLER COMPLIANCE STATEMENT FOR DUCT LEAKAGE

Copies to: Builder, HERS Rater, Building Owner at Occupancy and Building Department

INSTALLER COMPLIANCE STATEMENT

The building was: Tested at Final Tested at Rough-in

INSTALLER VISUAL INSPECTION AT FINAL CONSTRUCTION STAGE:

- Remove at least one supply and one return register, and verify that the spaces between the register boot and the interior finishing wall are properly sealed.
- If the house rough-in duct leakage test was conducted without an air handler installed, inspect the connection points between the air handler and the supply and return plenums to verify that the connection points are properly sealed.
- Inspect all joints to ensure that no cloth backed rubber adhesive duct tape is used

DUCT LEAKAGE REDUCTION

Procedures for field verification and diagnostic testing of air distribution systems are available in RACM, Appendix RC4.3

NEW CONSTRUCTION:		Measured Values	
Duct Pressurization Test Results (CFM @ 25 Pa)			
1 Enter Tested Leakage Flow in CFM:			
2 Fan Flow: Calculated (Nominal: <input checked="" type="checkbox"/> Cooling <input type="checkbox"/> Heating) or <input type="checkbox"/> Measured If Fan Flow is Calculated as 400 cfm/ton x number of tons or as 21.7 cfm/(kBtu/hr) x Heating Capacity in Thousands of Btu/hr, enter total calculated or measured fan flow in CFM here:		1400	
3 Pass if Leakage Percentage < 6% for Final or < 4% at Rough-In: [100 x [_____ (Line # 1) / _____ (Line # 2)]]			<input type="checkbox"/> Pass <input type="checkbox"/> Fail
ALTERATIONS: Duct System and/or HVAC Equipment Change-Out			
4 Enter Tested Leakage Flow in CFM from Pre-Test of Existing Duct System Prior to Duct System Alteration and/or Equipment Change-Out.			
5 Enter Tested Leakage Flow in CFM from Final Test of New Duct System or Altered Duct System for Duct System Alteration and/or Equipment Change-Out.		64	
6 Enter Reduction in Leakage for Altered Duct System [_____ (Line # 4) Minus _____ (Line # 5)] - (Only if Applicable)			
7 Enter Tested Leakage Flow in CFM to Outside (Only if Applicable)			
8 Entire New Duct System - Pass if Leakage Percentage < 6% for Final or < 4% at Rough-in [100 x [64 (Line # 5) / 1400 Line # 2]]		4.6%	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail
TEST OR VERIFICATION STANDARDS: For Altered Duct System and/or HVAC Equipment Change-Out			
Use one of the following four Test or Verification Standards for compliance:			
9 Pass if Leakage Percentage < 15% [100 x [_____ (Line # 5) / _____ (Line # 2)]]			<input type="checkbox"/> Pass <input type="checkbox"/> Fail
10 Pass if Leakage to Outside Percentage < 10% [100 x [_____ (Line # 7) / _____ (Line # 2)]]			<input type="checkbox"/> Pass <input type="checkbox"/> Fail
11 Pass if Leakage Reduction Percentage > 60% [100 x [_____ (Line # 6) / _____ (Line # 4)]] and Verification by Smoke Test and Visual Inspection			<input type="checkbox"/> Pass <input type="checkbox"/> Fail
12 Pass if Sealing of all Accessible Leaks and Verification by Smoke Test and Visual Inspection			<input type="checkbox"/> Pass <input type="checkbox"/> Fail
Pass if One of Lines # 9 through # 12 pass			<input type="checkbox"/> Pass <input type="checkbox"/> Fail

I, the undersigned, verify that the above diagnostic test results were performed in conformance with the requirements for compliance credit. I, the undersigned, also certify that the newly installed or retrofit Air-Distribution System Ducts, Plenums and Fans comply with Mandatory requirements specified in Section 150 (m) of the 2005 Building Energy Efficiency Standards.

Gary Tonarelli 1-17-06
Signature Date

Tonarelli Electric, Heating and Air Conditioning
Installing Subcontractor (Co. Name) OR
General Contractor (Co. Name)

CERTIFICATE OF FIELD VERIFICATION & DIAGNOSTIC TESTING (Page 1 of 8)

CF-4R

<u>5611 Milner Way</u> <i>Project Address</i>		<u>Tonarelli Electric, Heating & Air / 698232</u> <i>Contractor Name / License No.</i>	
<u>Contractor Contact</u>		<u>05-18148</u> <i>Permit Number</i>	
<u>Max McKinney</u>	<u>(916) 698-4185</u> <i>Telephone</i>	<u>14222</u> <i>Sample Group Number</i>	
<u><i>[Signature]</i></u> <i>HERS Rater</i>	<u>January 18, 2006</u> <i>Date</i>	<u>CC14-1798354804</u> <i>Certificate Number</i>	
<u>Energy Analysis and Comfort Solutions, Inc.</u> <i>Firm:</i>		<u>HERS Provider: CalCERTS</u>	
<u>P.O. Box 2233</u> <i>Street Address:</i>		<u>Orangevale / CA / 95662</u> <i>City/State/Zip:</i>	

Copies to: Homeowner, HERS Provider and Building Department

This CF-4R has been registered with the CalCERTS® registry in accordance with the Title 24 & Title 20 of the CCR. CalCERTS® is an approved HERS provider by the California Energy Commission.

HERS RATER COMPLIANCE STATEMENT

The house was Tested Approved as part of sample testing, but was not tested. As the HERS rater providing diagnostic testing and field verification, I certify that the house identified on this form complies with the diagnostic tested compliance requirements as checked on this form. The HERS rater must check and verify that the new distribution system is fully ducted and correct tape is used before a CF-4R may be released on every tested building. The HERS rater must not release the CF-4R until a properly completed and signed CF-6R has been received for the sample and tested buildings.

- The installer has provided a copy of the CF-6R (Installation Certificate).
- New Distribution system is fully ducted (i.e., does not use building cavities as plenums or platform returns in lieu of ducts).
- New systems where cloth backed, rubber adhesive duct tape is installed, mastic and drawbands are used in combination with cloth backed, rubber adhesive duct tape to seal leaks at duct connections.

MINIMUM REQUIREMENTS FOR DUCT LEAKAGE REDUCTION COMPLIANCE CREDIT: Main System

NEW CONSTRUCTION			
	Duct Pressurization Test Results (CFM @ 25 Pa)	Measured Values	
1	Enter Tested Leakage Flow in CFM:	N/A	
2	Fan Flow: Calculated (Nominal <input checked="" type="radio"/> Cooling <input checked="" type="radio"/> Heating) or <input checked="" type="radio"/> Measured Enter Total Fan Flow in CFM:	1400	
3	Pass if Leakage Percentage <= 6% [100 x (Line 1 / Line 2)]:	N/A	N/A
ALTERATIONS: Duct System and/or HVAC Equipment Change-Out			
4	Enter Tested Leakage Flow in CFM from CF-6R: Pre-Test of Existing Duct System Prior to Duct System Alteration and/or Equipment Change-Out.	64	
5	Enter Tested Leakage Flow in CFM: Final Test of New Duct System or Altered Duct System for Duct System Alteration and/or Equipment Change-Out.	64	
6	Enter Reduction in Leakage for Altered Duct System [Line 4 - Line 5] - (Only if Applicable)	0	
7	Enter Tested Leakage Flow in CFM to Outside (Only if Applicable)		
8	Entire New Duct System - Pass if Leakage Percentage <= 6% [100 x (Line 5 / Line 2)]:	4.6%	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail
TEST OR VERIFICATION STANDARDS: For Altered Duct System and/or HVAC Equipment Change-Out, use one of the following four Test or Verification Standards for compliance:			
9	Pass if Leakage Percentage <= 15% [100 x (Line 5 / Line 2)]:		<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail
10	Pass if Leakage to Outside Percentage <= 10% [100 x (Line 7 / Line 2)]:		<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail
11	Pass if Leakage Reduction Percentage >= 60% [100 x (Line 6 / Line 4)] and Verification by Smoke Test and Visual Inspection		<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail
12	Pass if Sealing of all Accessible Leaks and Verification by Smoke Test and Visual Inspection		<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail
	Pass if One of Lines #9 through #12 pass		<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail

http://www.calcerts.com/cf4r_print_certificate.cfm?lots=14222&RequestTimeout=10000 1/18/2006

Jan 18 2006 12:59PM Energy Analysis & Comfort 916-988-2387 p.6