



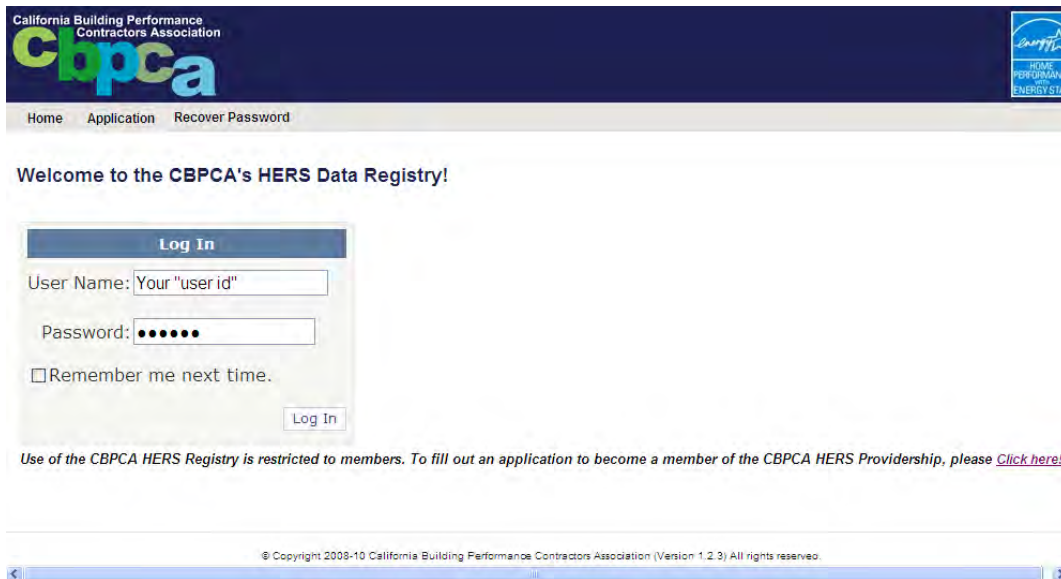
INSTRUCTION GUIDE AND FAQ TO THE CBPCA DATA REGISTRY

REGISTRATION OF THE CF-6R

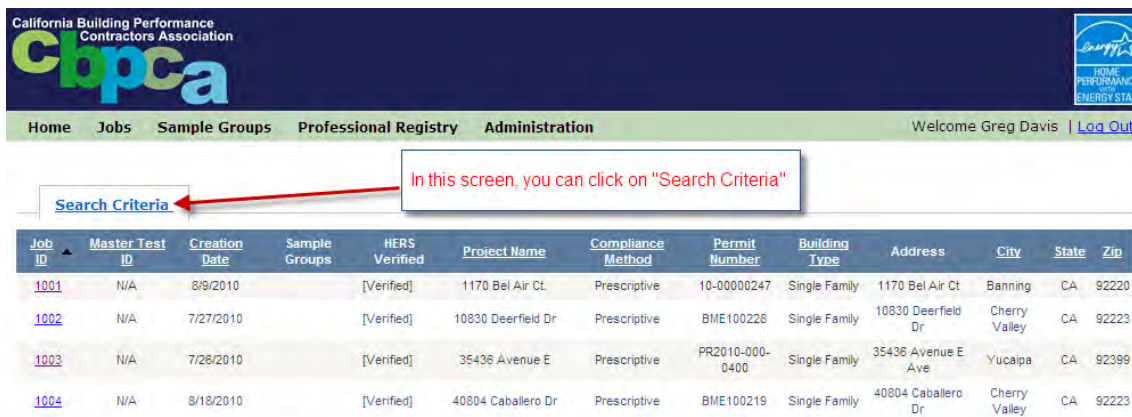
If not already logged on, log onto the registry with the below web address. Be sure to save this address to your "Favorites."

<http://cbpcaregistry.greennet.com/Login/Login.aspx>

The below screen will appear. Log on using your "user Id" and "password" provided to you by the CBPCA.



Once you're logged on, you can search through the registry several different ways



The below "Search Criteria" screen appears...

You have the ability to search many different ways!

[Search Criteria](#)

Job ID: 2018

Job Creation Date: [] To []

Type of Job: Addition Alteration New Construction

Building Permit Number: []

Climate Zone Number: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

Compliance Method: N/A Prescriptive Compliance

Sample Group Number: []

Street Name: []

Street Number: []

Street Type: Select >>

City: Select >>

State: Select >>

Zip: []

Project Name: []

General Contractor: Select >>

Duct Installing and/or Sealing Contractor: Select >>

Duct Testing Contractor: Select >>

HVAC Installation Contractor: Select >>

HERS Rater: Select >>

Builder: Select >>

HERS Rater Certificate Number: []

Search Clear Search

Click "Search" when done

As noted in the previous tutorial, it is a good idea to take note of the Job ID number for this very reason. But, as you can see, there is a myriad of searchable options available to you.

Search Clear Search

Click on the "Job ID" and open your file!

Job ID	Master Test ID	Creation Date	Sample Groups	HERS Verified	Project Name	Compliance Method	Permit Number	Building Type	Address	City	State	Zip
2018	N/A	10/12/2010		[Verified]	2901 Fountainhead Dr, San Ramon	Prescriptive	10-0991	Single Family	2901 Fountainhead Dr	San Ramon	CA	94583

Found 1 result.

JOB DETAIL [ID: 2018]

After generating the CF-1R, we need to complete some required information that wasn't needed for the CF-1R but is needed for the CF-6Rs

Click "Edit"
 Edit

Project Information	Site / Building Information
Project Name: 2901 Fountainhead Dr, San Ramon	Site Address: 2901 Fountainhead Dr San Ramon CA 94583
Project Type: Alteration	Home Phone: 925-837-1583
Is TPQCP Job? No	Mobile Phone: N/A
Compliance Method: Prescriptive	Fax Number: N/A
Enforcement Agency: San Ramon, City of	Email: N/A
Permit Number: <u> </u>	Climate Zone: 12
Customer Name: <u> </u>	Building Type: Single Family
Customer Address: 2901 Fountainhead Dr San Ramon CA 94583	Number of Stories: 1
Home Phone: 925-837-1583	Front Orientation: N
Mobile Phone: N/A	Conditioned Floor Area: 1300
Fax Number: N/A	Fuel Type: Other
Email: N/A	Component Package: D

HVAC Systems		
Heating Equipment System in , Type: Furnace, Model: N/A, Serial: N/A	Duct System ID: , Location:	Cooling Equipment System in , Type: Air Conditioner, Model: N/A, Serial: N/A

Contractor Measurements	HERS Verifications	Pending Measurements	Required Measurements						
No measurements have been captured for this job.	No verification have been captured for this job.	<table border="1"> <thead> <tr> <th>Equipment</th> <th>Type</th> </tr> </thead> <tbody> <tr> <td>2018 - CoolerAndHeater</td> <td>Refrigerant Charge Verification Capture CF-6R-MECH-25-HERS Data</td> </tr> <tr> <td>2018 - CoolerAndHeater</td> <td>Duct Leakage Test Existing Capture CF-6R-MECH-21-HERS Data</td> </tr> </tbody> </table>	Equipment	Type	2018 - CoolerAndHeater	Refrigerant Charge Verification Capture CF-6R-MECH-25-HERS Data	2018 - CoolerAndHeater	Duct Leakage Test Existing Capture CF-6R-MECH-21-HERS Data	<ul style="list-style-type: none"> Refrigerant Charge Verification Duct Leakage Test Existing
Equipment	Type								
2018 - CoolerAndHeater	Refrigerant Charge Verification Capture CF-6R-MECH-25-HERS Data								
2018 - CoolerAndHeater	Duct Leakage Test Existing Capture CF-6R-MECH-21-HERS Data								

CF-1R Information	Sampling
<p>* Your CF1R form has been generated, if you have any changes you will need to re-generate your PDF Re-generate Form</p> <p>* Select Type of Job: <input type="text" value="Independent-Rater Job"/></p> <p>* Your form is complete and you can download it here. Download CF1R - Revision A</p>	Status: Job not participating in sampling

Contractors Information	CF-6R MECH-04						
<table border="1"> <tr> <td>General: N/A</td> <td>Duct Installer/Sealing: N/A</td> </tr> <tr> <td>HVAC: Eco Systems Heating & Air</td> <td>Duct Testing: N/A</td> </tr> <tr> <td>HERS Rater: N/A</td> <td>Builder: N/A</td> </tr> </table>	General: N/A	Duct Installer/Sealing: N/A	HVAC: Eco Systems Heating & Air	Duct Testing: N/A	HERS Rater: N/A	Builder: N/A	No CF-6R MECH-04 has been generated, press here to create.
General: N/A	Duct Installer/Sealing: N/A						
HVAC: Eco Systems Heating & Air	Duct Testing: N/A						
HERS Rater: N/A	Builder: N/A						

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Home Jobs Sample Groups Professional Registry Administration Welcome Greg Davis | [Log Out](#)

Edit Job [ID: 2018] Save Cancel

Job Details Contractors **Equipment** HERS Verification Measurements

Details

Project Name: 2901 Fountainhead Dr, Sa
 Permit Number: 10-0991
 Enforcement Agency: San Ramon, City of
 Project Type: Alteration

Unit Details

Climate Zone Number: 12
 Building Type: Single Family Multi Family
 Number of Stories: 1
 Conditioned Floor Area: 1300

Client Information

First Name: Ronald
 Last Name: Casino

Input the Permit number and Client Information
Don't "Save" yet, we need to update the "Equipment" section

California Building Performance Contractors Association
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Home Jobs Sample Groups Professional Registry Administration Welcome Greg Davis | [Log Out](#)

Edit Job [ID: 2018] Save Cancel

Job Details Contractors **Equipment** HERS Verification Measurements

Equipment

• Must have defined at least one HVAC equipment.

Please select what equipment to add: Heating & Cooling Cooling Heating

No A/C on-site? Pick me!

Heating		Cooling	
Equipment Name:	System	Equipment Name:	System
Location/Area Served:	House	Location/Area Served:	House
Type:	Furnace	Type:	Air Conditioner
<input type="radio"/> Existing <input checked="" type="radio"/> New/Replacement		<input type="radio"/> Existing <input checked="" type="radio"/> New/Replacement	
Manufacturer:	Trane	Manufacturer:	Trane
Model Number:	TUD2B060A9362AB	Model Number:	4TTB3030D1000A
Serial Number:		Serial Number:	102710473F
ARI Reference Number:		ARI Reference Number:	
Load:	0	Load:	0
Capacity:	48000	Capacity:	30000
Efficiency:	AFUE 80	Efficiency:	SEER 13
Configuration:	Split	Configuration:	Split
Fuel Type:	Gas	Distribution Type:	Ducted
Distribution Type:	Ducted	Operable:	InOperable

Heating

If there is only one "system" in the home, type "system". Can be "house", "upstairs", etc.

Select correct option

Need to know!

Don't need to know

This comes from the CF-1R. Is it still correct?

Cooling

No A/C on-site? Pick me!

More than one System in the home? Label them "System 1" or "System 2"

If you have replaced over 40' of ductwork in unconditioned space, enter the R-value, otherwise, leave it blank

Distribution

Thermostat Type: SetBack

Name or Identification Tag: System

Duct Location: Attic

Ducts In Conditioned Space?: No Yes

Duct Diameter in Inches: Not needed

Location or Area Served: House

Duct R-Value:

Duct System: New/Replacement Existing or Partial Replacement/Extension

Duct Length in Feet: 60

100% new duct system, click here, otherwise, click here

How much (existing and/or new) total ductwork is in unconditioned space (approx)?

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After making your changes, Click "Save"

JOB DETAIL [ID: 2018]

After Saving, we are taken back to the Job Detail screen

[Edit](#)

Project Information	Site / Building Information
Project Name: 2901 Fountainhead Dr. San Ramon	Site Address: 2901 Fountainhead Dr San Ramon CA 94583
Project Type: Alteration	Home Phone: 925-837-1583
Is TPQCP Job? No	Mobile Phone: N/A
Compliance Method: Prescriptive	Fax Number: N/A
Enforcement Agency: San Ramon, City of	Email: N/A
Permit Number: 10-0991	Climate Zone: 12
Customer Name: Ronald Casino	Building Type: Single Family
Customer Address: 2901 Fountainhead Dr San Ramon CA 94583	Number of Stories: 1
Home Phone: 925-837-1583	Front Orientation: N
Mobile Phone: N/A	Conditioned Floor Area: 1300
Fax Number: N/A	Fuel Type: Other
Email: N/A	Component Package: D

HVAC Systems

Heating Equipment	Duct System	Cooling Equipment
System in House, Type: Furnace, Model: TUD2B060A9362AB, Serial: N/A ID: System, Location: House System in House, Type: Air Conditioner, Model: 4TTB3030D1000A, Serial: 102710473F		

Contractor Measurements	HERS Verifications	Pending Measurements	Required Measurements									
No measurements have been captured for this job.	No verification have been captured for this job.	<table border="1"> <thead> <tr> <th>Equipment</th> <th>Type</th> <th></th> </tr> </thead> <tbody> <tr> <td>2018 - CoolerAndHeater</td> <td>Refrigerant Charge Verification</td> <td>Capture CF-RR-MECH-20-HERS Data</td> </tr> <tr> <td>2018 - CoolerAndHeater</td> <td>Duct Leakage Test Existing</td> <td>Capture CF-RR-MECH-21-HERS Data</td> </tr> </tbody> </table>	Equipment	Type		2018 - CoolerAndHeater	Refrigerant Charge Verification	Capture CF-RR-MECH-20-HERS Data	2018 - CoolerAndHeater	Duct Leakage Test Existing	Capture CF-RR-MECH-21-HERS Data	<ul style="list-style-type: none"> Refrigerant Charge Verification Duct Leakage Test Existing
Equipment	Type											
2018 - CoolerAndHeater	Refrigerant Charge Verification	Capture CF-RR-MECH-20-HERS Data										
2018 - CoolerAndHeater	Duct Leakage Test Existing	Capture CF-RR-MECH-21-HERS Data										

CF-1R Information

* Your CF1R form has been generated, if you have any changes you will need to re-generate your PDF. [Re-generate Form](#)

* Select Type of Job:

* Your form is complete and you can download it here. [Download CF1R - Revision A](#)

Sampling

Status: Job not participating in sampling

From here, we can capture the test results for the required measures

Contractors Information

General: N/A	Duct Installer/Sealing: N/A
HVAC: Eco Systems Heating & Air	Duct Testing: N/A
HERS Rater: N/A	Builder: N/A

CF-6R MECH-04

* No CF-6R MECH-04 has been generated, press [here](#) to create.

But first, let's generate the CF-6R Mech-04

INSTALLATION CERTIFICATE CF-6R-MECH-04
 Space Conditioning Systems, Ducts and Fans

Back Generate PDF

Site Address: Fountainhead 94583 San Ramon California
 Enforcement Agency: San Ramon, City of
 Permit Number: 10-0991

When done, click "Generate PDF"

Space Conditioning Systems
 Heating Equipment

Equip Type (package-heat pump)	CEC Certified Mfr. Name and Model Number	ARI Reference Number	# of Identical Systems	Efficiency (AFUE, etc) (>=CF-1R value)	Duct Location (attic, crawl-space, etc.)	Duct R-value	Heating Load (Btu/hr)	Heating Capacity (Btu/hr)
Furnace	TUD2B060A9362AB		1	80	House		0	48000
Furnace	TUD2B060A9362AB		1	80	House		0	48000

Cooling Equipment

Equip Type (package-heat pump)	CEC Certified Mfr. Name and Model Number	ARI Reference Number	# of Identical Systems	Efficiency (AFUE, etc) (>=CF-1R value)	Duct Location (attic, crawl-space, etc.)	Duct R-value	Cooling Load (Btu/hr)	Cooling Capacity (Btu/hr)
AirConditioner	4TTB3030D1000A		1	13	House		0	30000
AirConditioner	4TTB3030D1000A		1	13	House		0	30000

ALL BOXES MUST BE CHECKED TO BE A VALID FORM

Need we say more?

- §110-§113:HVAC equipment is certified by the California Energy Commission.
- §150(h):Heating and/or Cooling loads calculated in accordance with ASHRAE, SMACNA, or ACCA.
- §150(i):Setback Thermostat on all applicable heating and/or cooling systems meet the requirements of §112(c).
- §150(j):Pipe insulation for cooling system refrigerant suction, chilled water and brine lines meet minimum requirements of Table 150-B and includes a vapor retardant or is enclosed entirely in conditioned space.

Ducts and Fans

- 1. All air-distribution system ducts and plenums installed, sealed and insulated to meet the requirement of CMC Sections 601, 602, 603, 604, 605 and Standard 6-5;supply-air and return-air ducts and plenums are insulated to a minimum installed level of R-4.2 or enclosed entirely in conditioned space. Openings shall be sealed with mastic, tape or other duct-closure system that meets the applicable requirements of UL 181A, or UL 181B or aerosol sealant that meets the requirements of UL 723. If mastic or tape is used to seal openings greater than 1/4 inch, the combination of mastic and either mesh or tape shall be used;and
- 1. Building cavities, support platforms for air handlers, and plenums defined or constructed with materials other than sealed sheet metal, duct board or flexible duct shall not be used for conveying conditioned air. Building cavities and support platforms may contain ducts. Ducts installed in cavities and support platforms shall not be compressed to cause reductions in the cross-sectional area of the ducts.
- 2D. Joints and seams of duct systems and their components shall not be sealed with cloth back rubber adhesive duct tapes unless such tape is used in combination with mastic and draw bands.
- 7. Exhaust fan system have back draft or automatic dampers.
- 8. Gravity ventilating systems serving conditioned space have either automatic or readily accessible, manually operated dampers.
- 9. Protection of Insulation. Insulation shall be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind. Cellular foam insulation shall be protected as above or painted with a coating that is water retardant and provides shielding from solar radiation that can cause degradation of the material.
- 10. Flexible ducts cannot have porous inner cores.

Declaration Statement

- I certify under penalty of perjury, under the laws of the State of California, the information provided on this form is true and correct.
- I am eligible under Division 3 of the Business and Professions Code to accept responsibility for construction, or an authorized representative of the person responsible for construction (responsible person).
- I certify that the installed features, materials, components, or manufactured devices identified on this certificate (the installation) conforms to all applicable codes and regulations, and the installation is consistent with the plans and specifications approved by the enforcement agency.
- I reviewed a copy of the Certificate of Compliance (CF-1R) from approved by the enforcement agency that identifies the specific requirements for the installation. I certify that the requirements detailed on the CF-1R that apply to the installation have been met.
- I will ensure that a completed, signed copy of this Installation Certificate shall be posted, or made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a signed copy of this Installation Certificate is required to be included with the documentation the builder provides to the building owner at occupancy.

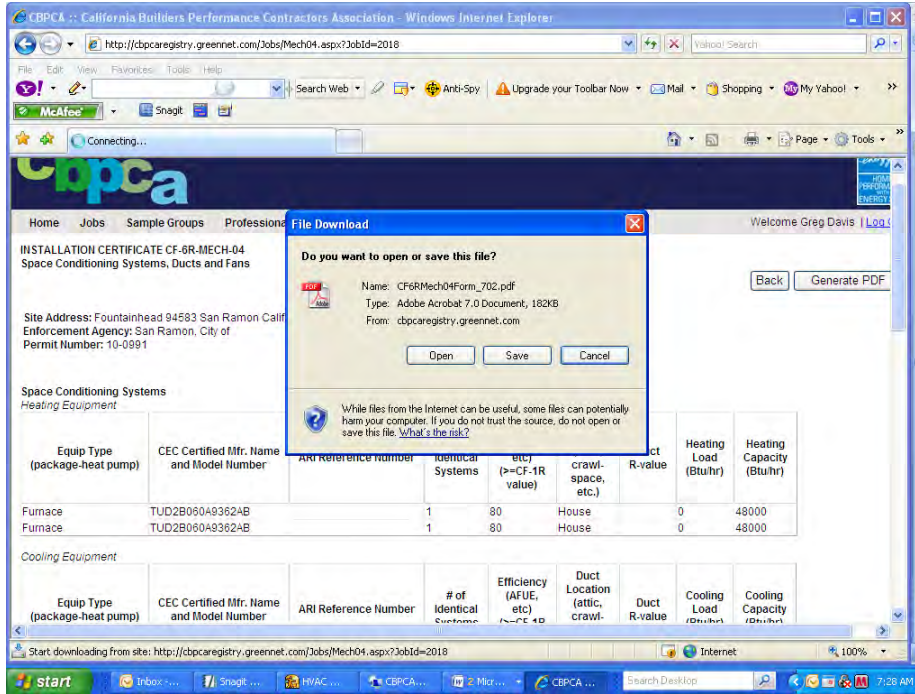
Company Name: (Installing Subcontractor or General Contractor or Builder/Owner):
 Eco Systems Heating & Air

Responsible Person's Name: Abraham Alvarez
 Responsible Person's Signature: Abraham Alvarez

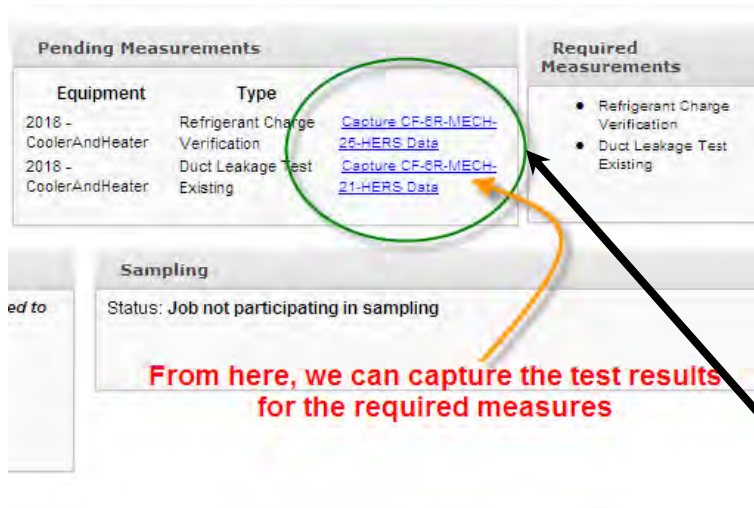
CSLB License: 924909
 Date Signed: 10/12/2010
 Position With Company(Title): Owner

Complete the Contractor information

You can “Save” the CF-6R Mech-04 to your computer, or “Open” the file to print the document and email the document.



When done, Close the PDF and click the “Back” button in the registry to take you back to the Job Detail screen. From Here we can input or “capture” our test results.



From here, we can capture the test results for the required measures

Let's Start with the Duct Leakage Test **CF-6R Mech-21 HERS**. Click on the link!

INSTALLATION CERTIFICATE CF-6R-MECH-21-HERS
Duct Leakage Test - Existing Duct System

When done, click "Save Test"

System Name: System
System Location: House

Select one compliance method from the following four choices.

- Option 1. Measured leakage less than 15% of Fan Airflow
- Option 2. Measured leakage to outside less than 10% of Fan Airflow
- Option 3. Reduced leakage by 60% or more, and conduct smoke test to seal all accessible leaks.
- Option 4. Fix all accessible leaks using smoke test, and HERS rater must verify

Select your compliance option

Determine nominal Fan Airflow using one of the following three calculations:

- Cooling
- Heating
- Measured Airflow

In this example, cooling was selected. Type in the tonnage then tab through and the registry will do the math for you!

Nominal capacity of condenser in Tons: x 400 =

Option 1:
Allowed Leakage = Fan Airflow * x 0.15 = CFM *
Actual Leakage = CFM

Your test results

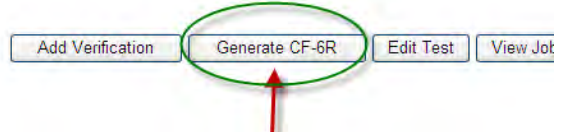
Pass Fail

- Outside air (OA) ducts for Central Fan Integrated (CFI) ventilation systems, shall not be sealed/taped off during duct leakage testing. CFI OA ducts that utilize controlled motorized dampers, that open only when OA ventilation is required to meet ASHRAE Standard 62.2, and close when OA ventilation is not required, may be configured to the closed position during duct leakage testing.
- All supply and return register boots must be sealed to the drywall.
- New Duct installations cannot utilize building cavities as plenums or platform returns in lieu of ducts.
- Mastic and draw bands must be used in combination with Cloth backed, rubber adhesive duct tape to seal leaks at duct connections.

All boxes must be checked

After saving, the below screen will appear...

INSTALLATION CERTIFICATE CF-6R-MECH-21-HERS
Duct Leakage Test - Existing Duct System



System Name: System
System Location: House

Contractor: Abraham Alvarez

After saving, you can go back to the Job detail screen, edit your results. Let's "Generate CF-6R" and register the document.

Select one compliance method from the following four choices.

- Option 1. Measured leakage less than 15% of Fan Airflow
- Option 2. Measured leakage to outside less than 10% of Fan Airflow
- Option 3. Reduced leakage by 60% or more, and conduct smoke test to seal all accessible leaks.
- Option 4. Fix all accessible leaks using smoke test, and HERS rater must verify

Determine nominal Fan Airflow using one of the following three calculations:

- Cooling
- Heating
- Measured Airflow

Nominal capacity of condenser in Tons: x 400 =

Option 1:

Allowed Leakage = Fan Airflow x 0.15 = CFM

Actual Leakage = CFM

Pass Fail

- Outside air (OA) ducts for Central Fan Integrated (CFI) ventilation systems, shall not be sealed/taped off during duct leakage testing. CFI OA ducts that utilize controlled motorized dampers, that open only when OA ventilation is required to meet ASHRAE Standard 62.2, and close when OA ventilation is not required, may be configured to the closed position during duct leakage testing.
- All supply and return register boots must be sealed to the drywall.
- New Duct installations cannot utilize building cavities as plenums or platform returns in lieu of ducts.
- Mastic and draw bands must be used in combination with Cloth backed, rubber adhesive duct tape to seal leaks at duct connections.

Review your data, then “Generate CF-6R”

The below screen will appear...

I want to register my Form after saving.

Click here

Back to Job Details

Register CF-6R Form

I just want the PDF

When done, click here

Declaration Statement

- I certify under penalty of perjury, under the laws of the State of California, the information provided on this form is true and correct.
- I am eligible under Division 3 of the Business and Professions Code to accept responsibility for construction, or an authorized representative of the person responsible for construction (responsible person).
- I certify that the installed features, materials, components, or manufactured devices identified on this certificate (the installation) conforms to all applicable codes and regulations, and the installation is consistent with the plans and specifications approved by the enforcement agency.
- I understand that a HERS rater will check the installation to verify compliance, and that if such checking identifies defects, I am required to take corrective action at my expense. I understand that Energy Commission and HERS provider representatives will also perform quality assurance checking of installations, including those approved as part of a sample group but not checked by a HERS rater, and if those installations fail to meet the requirements of such quality assurance checking, the required correct action and additional checking/testing of other installations in that HERS sample group will be performed at my expense.
- I reviewed a copy of the Certificate of Compliance (CF-1R) form approved by the enforcement agency that identifies the specific requirements for the installation. I certify that the requirements detailed on the CF-1R that apply to the installation have been met.
- I will ensure that a completed, signed copy of this Installation Certificate shall be posted, or made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a signed copy of this Installation Certificate is required to be included with the documentation the builder provides to the building owner at occupancy. I will ensure that all Installation Certificates will come from a HERS provider data registry for multiple orientation alternatives, and beginning October 1, 2010, for all low-rise residential buildings.

Company Name: (Installing Subcontractor or General Contractor or Builder/Owner)		
<input type="text" value="Eco Systems Heating & A"/>		
Responsible Person's Name:	Responsible Person's Signature:	
<input type="text" value="Abraham Alvarez"/>	<input type="text" value="Abraham Alvarez"/>	
CSLB License:	Date Signed:	Position With Company (Title):
<input type="text" value="924909"/>	<input type="text" value="10/12/2010"/>	<input type="text" value="Owner"/>
Is this installation monitored by a Third Party Quality Control Program (TPQCP)?		Name of TPQCP (if applicable):
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="text"/>

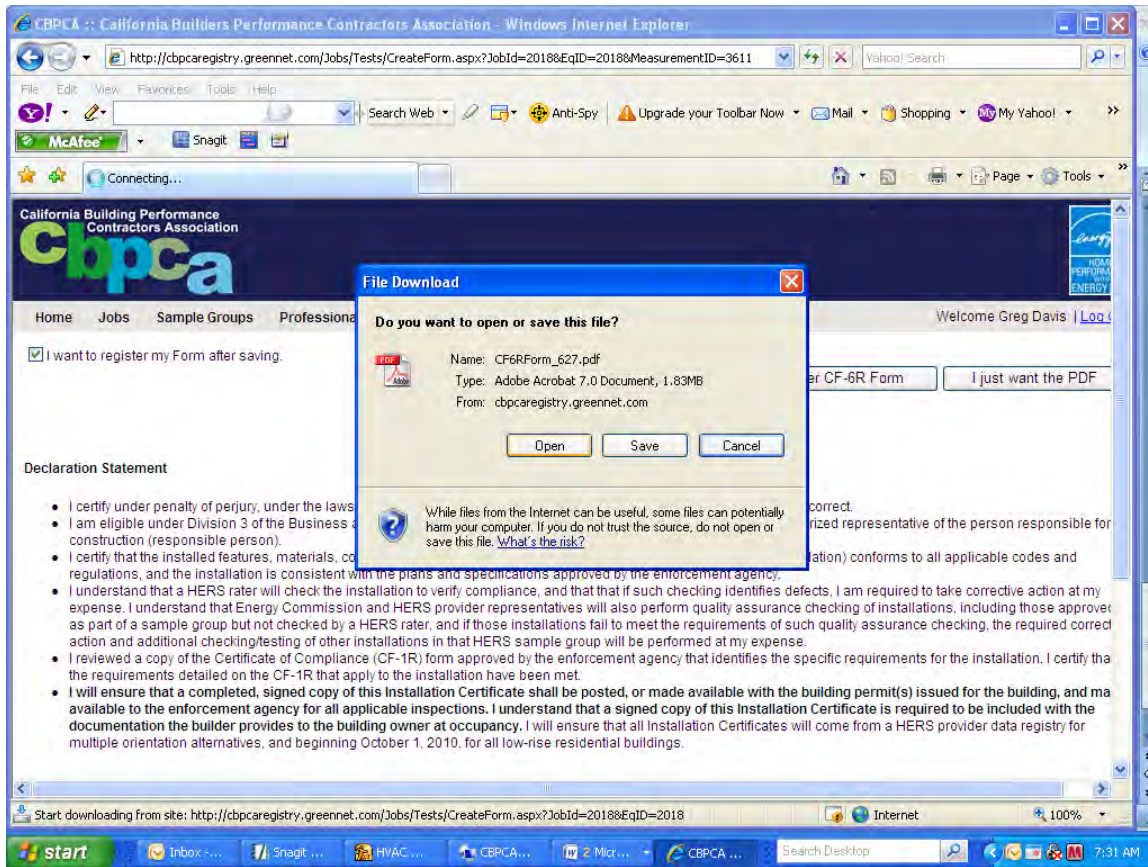
Type in the "Responsible Person" for these tests

Click the "I want to register my form after saving" box

Type in the Responsible Person's signature. This should not be a rater. Rather, it should be the installing or duct sealing contractor.

Click "Register CF-6R Form"

You can "Save" the CF-6R Mech-21 HERS to your computer, or "Open" the file to print the document and email the document.



When done, Close the PDF and click the “Back to Job Details” button in the registry to take you back to the Job Detail screen. From Here we can input or “capture” our next test results.

Pending Measurements		Required Measurements
Equipment	Type	
2018 - CoolerAndHeater	Refrigerant Charge Verification	<ul style="list-style-type: none"> Refrigerant Charge Verification Duct Leakage Test Existing
2018 - CoolerAndHeater	Duct Leakage Test Existing	

From here, we can capture the test results for the required measures

In this example, we still need to capture the CF-6R Mech-25 HERS
 Click the link for that form

This is a long form, so we have broken it into three parts...

Access holes and sensors

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INSTALLATION CERTIFICATE CF-6R-MECH-25-HERS
 Refrigerant Charge Verification - Standard Measurement Procedure

When done, click "Save" →

System Name: System
 System Location: House
 Type: AirConditioner
 Manufacturer: Trane
 Model: 4TTB3030D1000A
 Capacity: 30000

Contractor: Abraham Alvarez

TMAH - Access Holes in Supply and Return Plenums of Air Handler

1. Pass Fail 5/16 (8mm) access hole upstream of evaporative coil.

2. Pass Fail 5/16 (8mm) access hole downstream of evaporative coil.

Yes to 1 and 2 is a pass. Enter Pass or Fail Pass Fail

STMS - Sensor on the Evaporator Coil

3. Pass Fail Sensor is factory installed, or according to manufacturers specifications.

4. Pass Fail Sensor wire is suitable for connection to digital thermometer. Mini plug is accessible without changing the airflow.

5. Pass Fail Sensor measures the saturation temperature of the coil within 1.3°F.

Yes to 3, 4, and 5 is pass. N/A if not applicable. Enter Pass or Fail N/A Pass Fail

STMS - Sensor on the Condenser Coil

6. Pass Fail Sensor is factory installed, or according to manufacturers specifications.

7. Pass Fail Sensor wire is suitable for connection to digital thermometer. Mini plug is accessible without changing the airflow.

8. Pass Fail Sensor measures the saturation temperature of the coil within 1.3°F.

Yes to 6, 7, and 8 is pass. N/A if not applicable. Enter Pass or Fail N/A Pass Fail

Standard Charge Measurement Procedure (for use if outdoor air dry-bulb is above 55°F.)

When an RCA is required, so are Temperature Measurement Access Holes

STMS are only required for all new ductwork **AND** all new equipment

For standard alterations, this is typical



Unit information and recorded temperatures

Space Conditioning System	
Outdoor Unit Serial #	<input type="text" value="102710473F"/>
Outdoor Unit Make	<input type="text" value="Trane"/>
Outdoor Unit Model	<input type="text" value="4TTB3030D1000A"/>
Nominal Cooling Capacity Btu/hr	<input type="text" value="30000"/>
Date of Verification	<input type="text" value="10/9/2010"/> <input type="button" value="..."/>

All Required information

Calibration of Diagnostic Instruments	
Date of Refrigerant Gauge Calibration	<input type="text" value="10/1/2010"/> <input type="button" value="..."/> (Must be re-calibrated monthly)
Date of Thermocouple Calibration	<input type="text" value="10/1/2010"/> <input type="button" value="..."/> (Must be re-calibrated monthly)

All Required information

Measured Temperatures (°F)	
Supply (evaporator leaving) air dry-bulb temperature (Tsupply, db)	<input type="text" value="56"/>
Return (evaporator entering) air dry-bulb temperature (Treturn, db)	<input type="text" value="70"/>
Return (evaporator entering) air wet-bulb temperature (Treturn, wb)	<input type="text" value="55"/>
Evaporator saturation temperature (Tevaporator, sat)	<input type="text" value="39.1"/>
Condenser saturation temperature (Tcondenser, sat)	<input type="text" value="95.5"/>
Suction line temperature (Tsuction)	<input type="text" value="64"/>
Liquid Line Temperature (Tliquid)	<input type="text" value="82.7"/>
Condenser (entering) air dry-bulb temperature (Tcondenser, db)	<input type="text" value="76"/>

Record the 8 temperatures taken across the system

And what those temperatures mean!

Minimum Airflow Requirement
 Temperature Split Method Calculation for determining Minimum Airflow Requirement.

Calculate: Actual Temperature Split = $T_{return, db} - T_{supply, db}$

Target Temperature Split using $T_{return, wb}$ and $T_{return, db}$

Calculate difference: Actual Temperature Split - Target Temperature Split

Passes if difference is between $-3^{\circ}F$ and $+3^{\circ}F$ or upon re-measurement, if between $-3^{\circ}F$ and $-100^{\circ}F$. Enter Pass or Fail

Note: Temperature Split Method Calculation is not necessary if Actual Cooling Coil Airflow is verified using one of the airflow measurement procedures. If actual cooling coil airflow is measured, the value must be equal to or greater than the Calculated Minimum Airflow Requirement in the table below.

Calculated Minimum Airflow Requirement (CFM) = Nominal Cooling Capacity (ton) X

Calculated Minimum Airflow Requirement (CFM)

Measured Airflow (CFM)

Passes if measured airflow is greater than or equal to the calculated minimum airflow requirement. Enter Pass or Fail

Superheat Charge Method Calculation. This procedure is required to be used for fixed orifice metering device systems

Calculate: Actual Superheat = $T_{suction} - T_{evaporator, sat}$

Target Superheat using $T_{return, wb}$ and $T_{condenser, db}$

Calculate difference: Actual Superheat - Target Superheat

System passes if difference is between $-5^{\circ}F$ and $+5^{\circ}F$. Enter Pass or Fail

Subcooling Charge Method Calculations. This procedure is required to be used for thermostatic expansion valve (TXV) and electronic expansion valve (EXV) systems.

Calculate: Actual Subcooling = $T_{condenser, sat} - T_{liquid}$

Target Subcooling specified by manufacturer

Calculate difference: Actual Subcooling - Target Subcooling

System passes if difference is between $-3^{\circ}F$ and $+3^{\circ}F$. Enter Pass or Fail

Metering Device Calculations. This procedure is required to be used for thermostatic expansion valve (TXV) and electronic expansion valve (EXV) systems.

Calculate: Actual Superheat = $T_{suction} - T_{evaporator, sat}$

Enter allowable superheat range from manufacturer's specifications (or use range between $4^{\circ}F$ and $25^{\circ}F$ if manufacturer's specification is not available) -

System passes if actual superheat is within allowable superheat range. Enter Pass or Fail

Standard Charge Measurement Summary:
 System shall pass both refrigerant charge criteria, metering device criteria (if applicable), and minimum cooling coil airflow criteria based on measurements taken currently during system operation. If corrective actions were taken, all applicable verification criteria must be re-measured and/or recalculated.

System meets all refrigerant charge and airflow requirements. Enter Pass or Fail

Target Temp Split can be found in RA3. Table RA3.2-3

Though the airflow failed, it is still a pass! Look closer.

Low Temp Split means high airflow and that is good!

Temp Split too high?

You can measure it and if it passes, it passes!

Only for systems with NO TXV. Otherwise skip this...

No TXV, Table RA3.2-2 has target Superheat info

For systems with a TXV, use this section

Target subcool comes from the manufacturer.

Check nameplate, access panel on condenser, installation manual.

With TXV systems, we must also confirm Superheat to verify the TXV is working properly

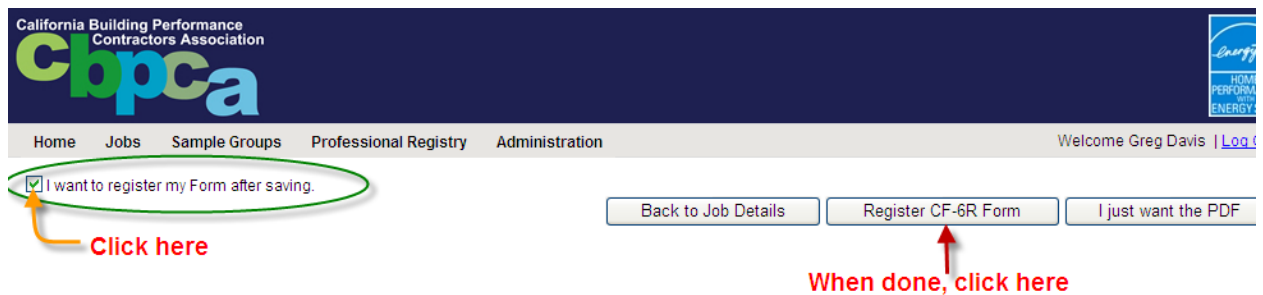
After saving...

Review your test results, and then click “Generate CF-6R” just like before.

Click the “I want to register my form after saving” box

Type in the Responsible Person’s signature. This should not be a rater. Rather, it should be the installing or duct sealing contractor.

Click “Register CF-6R Form”



Declaration Statement

- I certify under penalty of perjury, under the laws of the State of California, the information provided on this form is true and correct.
- I am eligible under Division 3 of the Business and Professions Code to accept responsibility for construction, or an authorized representative of the person responsible for construction (responsible person).
- I certify that the installed features, materials, components, or manufactured devices identified on this certificate (the installation) conforms to all applicable codes and regulations, and the installation is consistent with the plans and specifications approved by the enforcement agency.
- I understand that a HERS rater will check the installation to verify compliance, and that if such checking identifies defects, I am required to take corrective action at my expense. I understand that Energy Commission and HERS provider representatives will also perform quality assurance checking of installations, including those approved as part of a sample group but not checked by a HERS rater, and if those installations fail to meet the requirements of such quality assurance checking, the required corrective action and additional checking/testing of other installations in that HERS sample group will be performed at my expense.
- I reviewed a copy of the Certificate of Compliance (CF-1R) form approved by the enforcement agency that identifies the specific requirements for the installation. I certify that the requirements detailed on the CF-1R that apply to the installation have been met.
- I will ensure that a completed, signed copy of this Installation Certificate shall be posted, or made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a signed copy of this Installation Certificate is required to be included with the documentation the builder provides to the building owner at occupancy. I will ensure that all Installation Certificates will come from a HERS provider data registry for multiple orientation alternatives, and beginning October 1, 2010, for all low-rise residential buildings.

Company Name: (Installing Subcontractor or General Contractor or Builder/Owner)		
Eco Systems Heating & A		
Responsible Person's Name:	Responsible Person's Signature:	
Abraham Alvarez	Abraham Alvarez	
CSLB License:	Date Signed:	Position With Company (Title):
924909	10/12/2010	Owner
Is this installation monitored by a Third Party Quality Control Program (TPQCP)? Name of TPQCP (if applicable):		
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		

Type in the "Responsible Person" for these tests

You can “Save” the CF-6R Mech-25 HERS to your computer, or “Open” the file to print the document and email the document.

JOB DETAIL [ID: 2018]

Contractor measurements have been accepted and there are no more pending measurements

[Edit](#)

Project Information	Site / Building Information
Project Name: 2901 Fountainhead Dr, San Ramon	Site Address: 2901 Fountainhead Dr San Ramon CA 94583
Project Type: Alteration	Home Phone: 925-837-1583
Is TPQCP Job?: No	Mobile Phone: N/A
Compliance Method: Prescriptive	Fax Number: N/A
Enforcement Agency: San Ramon, City of	Email: N/A
Permit Number: 10-0991	Climate Zone: 12
Customer Name: Ronald Casino	Building Type: Single Family
Customer Address: 2901 Fountainhead Dr San Ramon CA 94583	Number of Stories: 1
Home Phone: 925-837-1583	Front Orientation: N
Mobile Phone: N/A	Conditioned Floor Area: 1300
Fax Number: N/A	Fuel Type: Other
Email: N/A	Component Package: D

HVAC Systems		
Heating Equipment	Duct System	Cooling Equipment
System in House, Type: Furnace, Model: TUD2B060A9367AB, Serial: N/A ID: System, Location: House System in House, Type: Air Conditioner, Model: 4TTB3030D1000A, Serial: 102710473F		

Contractor Measurements	HERS Verifications	Pending Measurements	Required Measurements												
<table border="1"> <thead> <tr> <th>Equipment</th> <th>Type</th> <th>Contractor</th> <th></th> </tr> </thead> <tbody> <tr> <td>2018 - CoolerAndHeater</td> <td>Duct Leakage Test Existing (Passed)</td> <td>Eco Systems Heating & Air</td> <td>View CF-6R: MECH-21-HERS Data</td> </tr> <tr> <td>2018 - CoolerAndHeater</td> <td>Refrigerant Charge Verification (Passed)</td> <td>Eco Systems Heating & Air</td> <td>View CF-6R: MECH-26-HERS Data</td> </tr> </tbody> </table>	Equipment	Type	Contractor		2018 - CoolerAndHeater	Duct Leakage Test Existing (Passed)	Eco Systems Heating & Air	View CF-6R: MECH-21-HERS Data	2018 - CoolerAndHeater	Refrigerant Charge Verification (Passed)	Eco Systems Heating & Air	View CF-6R: MECH-26-HERS Data	No verification have been captured for this job.	There are no pending measurements for this job.	<ul style="list-style-type: none"> Refrigerant Charge Verification Duct Leakage Test Existing
Equipment	Type	Contractor													
2018 - CoolerAndHeater	Duct Leakage Test Existing (Passed)	Eco Systems Heating & Air	View CF-6R: MECH-21-HERS Data												
2018 - CoolerAndHeater	Refrigerant Charge Verification (Passed)	Eco Systems Heating & Air	View CF-6R: MECH-26-HERS Data												

CF-1R Information	Sampling
<p>* Your CF1R form has been generated, if you have any changes you will need to re-generate your PDF Re-generate Form</p> <p>Select Type of Job: <input type="text" value="Independent-Rater Job"/></p> <p>* Your form is complete and you can download it here. Download CF-1R - Revision A</p>	Status: Job not participating in sampling

Contractors Information	CF-6R MECH-04												
<table border="1"> <tr> <td>General:</td> <td>N/A</td> <td>Duct Installer/Sealing:</td> <td>N/A</td> </tr> <tr> <td>HVAC:</td> <td>Eco Systems Heating & Air</td> <td>Duct Testing:</td> <td>N/A</td> </tr> <tr> <td>HERS Rater:</td> <td>N/A</td> <td>Builder:</td> <td>N/A</td> </tr> </table>	General:	N/A	Duct Installer/Sealing:	N/A	HVAC:	Eco Systems Heating & Air	Duct Testing:	N/A	HERS Rater:	N/A	Builder:	N/A	Download CF-6R MECH-04 or Create new CF-6R MECH-04
General:	N/A	Duct Installer/Sealing:	N/A										
HVAC:	Eco Systems Heating & Air	Duct Testing:	N/A										
HERS Rater:	N/A	Builder:	N/A										



Congratulations!

See our other tutorials on creating CF-4Rs for HERS raters.

If you have more questions, email them to barbara.heger@cbpca-hers.org. Thank you for choosing the CBPCA, the leader in home performance and HERS verifications. The most complete and easiest Smart Registry for all your HERS verification and required documentation needs.

We look forward to serving you and supporting your success.

Greg Davis
Lead HERS Trainer CBPCA
Greg.Davis@CBPCA-HERS.org