

CERTIFICATE OF INSTALLATION		CF3R-MCH-25-H
Refrigerant Charge Verification		(Page 1 of 4)
Project Name:	Enforcement Agency:	Permit Number:
Dwelling Address:	City:	Zip Code:

A. System Information		
<i>Each system requiring refrigerant charge verification will be documented on a separate certificate.</i>		
1	System Identification or Name	<<auto filled text: referenced from MCH01>>
2	System Location or Area Served	<<auto filled text: referenced from MCH01>>
3	Condenser (or package unit) make or brand	<<auto filled text: referenced from MCH01>>
4	Condenser (or package unit) model number	<<auto filled text: referenced from MCH01>>
5	Nominal tonnage of Condenser	<<auto filled text: referenced from MCH01>>
6	Condenser (or package unit) serial number	<<auto filled text: referenced from MCH01>>
7	Refrigerant Type	<<user select from list: <u>R-22</u> , or <u>R-410A</u> , or <u>other</u> >>
8	Other Refrigerant Type (if applicable)	<<user input: text (identify refrigerant type if "other" is selected in A7)>>
9	Project Type	<<user pick one from list: <u>CompletelyNew</u> ; or <u>Replacement</u> ; or <u>Alteration</u> >>
10	Date of Refrigerant Charge Verification for this system	<<user input: date: use validated date format>>
11	Lowest outdoor air temperature that occurred during the refrigerant charge verification (degreeF)	<<user input: numeric: xxx.x, (this temperature value may constrain which verification method is allowed to be used)>>
12	Outdoor Temperature Qualification status	<<if A11<55F, then display text: "Superheat and Subcooling refrigerant charge verification methods are not allowed to be used when the outdoor temperature is less than 55F">>
13	Refrigerant charge verification method	<<user pick one from list: <u>Superheat</u> ; or <u>Subcooling</u> ; or <u>Weigh-in</u> ; or <u>Winter Setup</u> ; or <u>CID</u> ; or <u>New Package Unit with Factory Charge</u> >>
14	Person who performed the Refrigerant Charge Verification reported on this Certificate of Installation:	<<user input: select either "HVAC System Installer" or "HERS Rater" - data on this Certificate of Installation shall be the consistent with the data on the Certificate of Verification for the system - HERS verification compliance by sample group is not allowed for this dwelling">>
15	Group Sampling Qualification Status	<<calculated field: if A13= <u>HERS Rater</u> , then display text: "this system does not qualify for HERS verification compliance using Group Sampling as the HERS Rater tested system in the sample group"; elseif A10= <u>Weigh-in</u> , then display text: "this system does not qualify for HERS verification compliance using Group Sampling as a "not tested by a HERS Rater" system in the sample group - this system shall be verified by a HERS Rater">>

CERTIFICATE OF INSTALLATION		CF3R-MCH-25-H
Refrigerant Charge Verification		(Page 2 of 4)
Project Name:	Enforcement Agency:	Permit Number:
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B. Measurement Access Hole (MAH) Verification

Procedures for installing MAH are specified in Reference Residential Appendix RA3.2.2.3

1	Method used to demonstrate compliance with the Measurement Access Hole (MAH) requirement	<p><<text: select one of the options from list: "MAH installed and labeled consistent with Figure 3.2-1"; or . "Return side of system is located entirely within conditioned space such that an accurate return air dry-bulb temperature can be taken at the return grille"; or "MAH cannot be installed consistent with Figure 3.2-1. An alternative location has been provided and clearly labeled">></p>
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C. Minimum System Airflow Rate Verification

Procedures for verifying minimum system airflow are specified in Reference Residential Appendix RA3.2.2.7.

1	Minimum Required System Airflow Rate (cfm)	<p><calculated field, numeric xxxx.: if A9= <u>CompletelyNew</u> or <u>Replacement</u>, then display numeric value =A5*350; elseif A9=Alteration, then display numeric value =A5*300;</p>
2	System Airflow Rate Verification Status	<p><<calculated field: if this system has a registered a MCH-23 that meets the compliance criterion in C1, or if the system has registered a MCH-24 that complies with the alternative requirements, then display text: "Pass", else display text: "Fail">></p>

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D. Refrigerant Charge Verification - MCH25c - Weigh-In Charging Procedure

Procedures for instrument calibration and determining Refrigerant Charge using the Observation of Weigh-in Charging Procedure are given in Reference Residential Appendix RA 3.2.2.2 and RA3.2.32

1	Date of Digital Refrigerant Gauge Calibration	<<check against date of verification, must be re-calibrated monthly>>
2	Date of Digital Thermocouple Calibration	<<check against date of verification, must be re-calibrated monthly>>

CERTIFICATE OF INSTALLATION		CF3R-MCH-25-H
Refrigerant Charge Verification		(Page 3 of 4)
Project Name:	Enforcement Agency:	Permit Number:
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3	Specify the method for weigh-in	<input type="text" value="user select from list 'lineset correction' or 'total charge'"/>
4	Prior to introducing refrigerant, observe that the system is evacuated to 500 microns or less and, when isolated, has risen no more than 300 microns after 5 minutes.	<input type="checkbox"/> <must be checked>
5	Observe that the lineset correction is calculated based on the length and diameter of the lineset.	<input type="checkbox"/> < must be checked>
6	Observe that the indoor coil correction to refrigerant weight is used if it is supplied by the manufacturer.	<input type="checkbox"/> <must be checked when applicable>
7	Observe that the installer adds or removes the correct amount of refrigerant based on the calculated lineset correction.	<input type="text" value="user select from list: Pass, or Fail, only applicable when lineset correction is selected in line D3"/>
8	Observe that the installer correctly charges the system based on the total charge of the lineset, indoor coil and label.	<input type="text" value="user select from list: Pass or Fail, only applicable when total charge is selected in line D3"/>

E. Compliance Statement		
<input type="text" value="System passes the refrigerant charge verification when D1 and D2 are within 12 months of the date of the diagnostic test A10, C2='Pass' and D7 or D8 = 'Pass', display text: 'System passes the Refrigerant Charge Verification Requirement', otherwise display 'System fails the Refrigerant Charge Verification Requirement'. >>"/>		
1	HERS Rater Comments	<input type="text" value="Text field"/>

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT		
1. I certify that this Certificate of Installation documentation is accurate and complete.		
Name:	Signature:	
Company:	Date:	
Address:	CEA or CEPE or HERS Certification # If applicable:	
City/State/Zip:	Phone:	
RESPONSIBLE PERSON'S DECLARATION STATEMENT		

CERTIFICATE OF INSTALLATION		CF3R-MCH-25-H
Refrigerant Charge Verification		(Page 4 of 4)
Project Name:	Enforcement Agency:	Permit Number:
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1. I certify under penalty of perjury, under the laws of the State of California, the information provided on this Certificate of Installation is true and correct.
2. 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).
3. 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.
4. 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.
5. I reviewed a copy of the Certificate of Compliance (CF1R) approved by the enforcement agency that identifies the specific requirements for the installation. I certify that the requirements detailed on the CF1R that apply to the installation have been met.
6. **I will ensure that a completed, signed copy of this Certificate of Installation 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 Certificate of Installation is required to be included with the documentation the builder provides to the building owner at occupancy.** I will ensure that all Certificates of Installation are registered with a HERS Provider Data Registry for projects that require HERS verification.

Company Name: (Installing Subcontractor or General Contractor or Builder/Owner)

Responsible Person's Name:		Responsible Person's Signature:	
CSLB License:	Date Signed:	Position With Company (Title):	
Is this installation monitored by a Third Party Quality Control Program (TPQCP)? <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Name of TPQCP (if applicable):	

CERTIFICATE OF INSTALLATION		CF3R-MCH-25-H
Refrigerant Charge Verification		(Page 5 of 3)
Project Name:	Enforcement Agency:	Permit Number:
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Instructions: <more detail to be provided>

Section A. System Information

1. This information is automatically pulled from the Certificate of Installation (MCH1).
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6. This information is automatically pulled from the Certificate of Installation (MCH1)
7. Indicate the type of refrigerant used in the system being verified, select from drop down list (R-22, R-410A or other).
8. Indicate the type of refrigerant used, other than R-22 or R-410A, in the system being verified.
9. Indicate whether the HVAC system is Completely New, Replacement or an Alteration.
10. Specify the date the refrigerant charge verification is performed.
11. Measure and Record the lowest outdoor air temperature that occurred during the refrigerant charge verification (degree).
12. This information is automatically displayed if A11 is less than 55F.
13. Based on the outdoor temperature, metering devise and system configuration, specify the method of verification from the drop down list.
14. Identify who will be performing the verification, select from the two options.
15. The sampling status automatically displayed based on the input results of A13 and A10system identification/name is automatically Enter the date that refrigerant charge verification took place.

Section B. Measurement Access Hole (MAH) Verification

1. Indicate the method used to demonstrate compliance with the MAH requirement by selecting the appropriate method from the drop down list.

Section C. Minimum System Airflow Rate Verification

1. This information is automatically calculated based on the information given in line A9.
2. This information is automatically calculated based on either the MCH-23, or MCH-24.

Section D. Refrigerant Charge Verification – HERS Rater Observation of Weigh-In Charging Procedure

1. Indicate the date of calibration of the digital refrigerant gauge used in this procedure.
2. Indicate the date of calibration of the digital thermocouple used in this procedure.
3. Specify method of weigh-in from the drop down list.
4. Check the box after observing that the installer performs and that the system passes the micron rise test.
5. Check the box after observing that the installer calculates the lineset correction based on the lineset length and the lineset diameter.
6. If the installer performs the total charge method, then check the box after observing that the indoor coil correction is used when supplied by the manufacturer.
7. Specify pass or fail after observing the installer adjusting the refrigerant based on the lineset correction.
8. Specify pass or fail after observing the installer charging the system based on total charge (lineset, indoor coil and standard label charge).

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