

CEC-NRCI-MCH-20-F

CERTIFICATE OF INSTALLATION

Project Name:	Enforcement Agency:
Dwelling Address:	Permit Number:
City and Zip Code:	Permit Application Date:

A. System Information

01	Space Conditioning System Identification or Name	
02	Space Conditioning System Location or Area Served	
03	Indoor Unit Name or Description of Area Served	
04	Building Type from CF1R	
05	Verified Low Leakage Ducts in Conditioned Space (VLLDCS) Credit from CF1R?	
06	Verified Low Leakage Air-Handling Unit Credit from CF1R?	
07	Duct System Compliance Category	
08	Any portions of Duct Located in Garage?	
09	Is the system type Small Duct High Velocity (SDHV)?	

B1. Duct Leakage Diagnostic Test for Completely New Duct System

	<u> </u>	
01	Air-Handling Unit Airflow (AHU Airflow) Determination Method	
02	Condenser Nominal Cooling Capacity (ton)	
03	Indoor Unit Nominal Cooling Capacity	
04	Heating Capacity (kBtu/h)	
05	Conditioned Floor Area Served by this HVAC System (ft²)	
06	Measured AHU Airflow (cfm)	
07	Duct Leakage Test Conditions	
08	Duct Leakage Test Method	
09	Leakage Factor	
10	Calculated Target Allowable Duct Leakage Rate (cfm)	
11	Actual Duct Leakage Rate from Leakage Test Measurement	
	(cfm)	
12	Compliance Statement:	

B2. Duct Leakage Diagnostic Test for Low Leakage Ducts in Conditioned Space

01	System compliance with visual inspection per RA3.1.4.1.3?	
02	Duct Leakage Test Conditions	
03	Duct Leakage Test Method	
04	Target Allowable Duct Leakage Rate (cfm)	
05	Actual Duct Leakage Rate from Leakage Test Measurement (cfm)	
06	Compliance Statement:	



CEC-NRCI-MCH-20-F

B3. Duct Leakage Diagnostic Test for Low Leakage Air-Handling Unit (LLAHU)

	33. Duct Leakage Diagnostic Test for Low Leakage An-Handling Offic (LLAHO)		
01	Air-Handling Unit Airflow (AHU Airflow) Determination Method		
02	Condenser Nominal Cooling Capacity (ton)		
03	Indoor Unit Nominal Cooling Capacity		
04	Heating Capacity (kBtu/h)		
05	Conditioned Floor Area Served by this HVAC System (ft²)		
06	Measured AHU Airflow (cfm)		
07	Duct Leakage Test Conditions		
08	Duct Leakage Test Method		
09	Leakage Factor		
10	Calculated Target Allowable Duct Leakage Rate (cfm)		
11	Actual Duct Leakage Rate from Leakage Test Measurement (cfm)		
12	Air-Handling Unit Manufacturer Name		
13	Air-Handling Unit Model Number		
14	Compliance Statement:		

B4. Duct Leakage Diagnostic Test for Complete Replacement or Altered Duct System

01	Air-Handling Unit Airflow (AHU Airflow) Determination Method	
02	Condenser Nominal Cooling Capacity (ton)	
03	Indoor Unit Nominal Cooling Capacity	
04	Heating Capacity (kBtu/h)	
05	Conditioned Floor Area Served by this HVAC System (ft²)	
06	Measured AHU Airflow (cfm)	
07	Duct Leakage Test Conditions	
08	Duct Leakage Test Method	
09	Leakage Factor	
10	Calculated Target Allowable Duct Leakage Rate (cfm)	
11	Actual Duct Leakage Rate from Leakage Test Measurement (cfm)	
12	Compliance Statement:	



CEC-NRCI-MCH-20-F

B5. Duct Leakage Diagnostic Test for Replacement or Alteration Using Smoke Test

01	Air-Handling Unit Airflow (AHU Airflow) Determination Method	
02	Condenser Nominal Cooling Capacity (ton)	
03	Indoor Unit Nominal Cooling Capacity	
04	Heating Capacity (kBtu/h)	
05	Conditioned Floor Area Served by this HVAC System (ft²)	
06	Measured AHU Airflow (cfm)	
07	Duct Leakage Test Conditions	
08	Duct Leakage Test Method	
09	Leakage Factor	
10	Calculated Target Allowable Duct Leakage Rate (cfm)	
11	Actual Duct Leakage Rate from Leakage Test Measurement (cfm)	
12	Compliance Statement:	

C. Ducts Located in Garage Spaces

01	Duct Leakage Test Method	
02	Leakage Factor	
03	Air-Handling Unit Airflow (AHU Airflow) Determination Method	
04	Measured AHU Airflow (cfm)	
05	Calculated Target Allowable Duct Leakage Rate (cfm)	
06	Actual Duct Leakage Rate from Leakage Test Measurement (cfm)	
07	Compliance Statement:	



CEC-NRCI-MCH-20-F

D. Additional Requirements for Compliance

The responsible person's signature on this compliance document affirms that all applicable requirements in this table have been met.

01	System was tested in its normal operation condition. No temporary taping allowed.	
02	Outside air (OA) duct connections to the central forced air duct system shall not be sealed/taped off during duct leakage testing. OA ducts used for Central Fan Integrated (CFI) Indoor Air Quality ventilation systems, or Central Fan Ventilation Cooling Systems, that utilize dampers that open only when OA is required and automatically close when OA is not required, may configure the OA damper to the closed position during duct leakage testing.	
03	All supply and return register boots were sealed to the drywall.	
04	Building cavities were not used as plenums, or platform returns, in lieu of ducts.	
05	If cloth backed tape was used it was covered with Mastic and draw bands.	
06	All connection points between the air handler and the supply and return plenums are completely sealed.	
07	For completely new systems visual inspection at final construction stage: For all supply and return registers, verify that the spaces between the register boot and the interior finishing wall are properly sealed.	
08	For completely new systems visual inspection at final construction stage: 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.	
09	For completely new systems visual inspection at final construction stage: Inspect all joints to ensure that no cloth backed rubber adhesive duct tape is used.	
10	For Duct Systems with Low Leakage Air-Handling Unit (LLAHU): The Low Leakage Air-handling Unit Model identified on this compliance document is included in the list of certified Low Leakage Air-Handling Units published on the Energy Commission Website at: https://www.energy.ca.gov/rules-and-regulations/building-energy-efficiency/manufacturer-certification-building-equipment/low	
11	For Replacement or Alteration Duct Systems: If the system complies using the Smoke Test method, the smoke test was conducted in accordance with the requirements of Reference Residential Appendix RA3.1.4.3.6. Systems that comply using the smoke test shall not be included in sample groups for ECC verification compliance.	



CEC-NRCI-MCH-20-F

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

1. I certify that this Certificate of Installation documentation is accurate and complete.

<u> </u>	<u>'</u>
Documentation Author Name:	Documentation Author Signature:
Documentation Author Company Name:	Date Signed:
Address:	CEA/AEA/ECC Certification Identification (If applicable):
City/State/Zip:	Phone:

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

- 1. 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 in the applicable classification to accept responsibility for the system design, construction, or installation of features, materials, components, or manufactured devices for the scope of work identified on this Certificate of Installation and attest to the declarations in this statement (responsible builder/installer), otherwise I am an authorized representative of the responsible builder/installer.
- 3. The constructed or installed features, materials, components or manufactured devices (the installation) identified on this Certificate of Installation conforms to all applicable codes and regulations and the installation conforms to the requirements given on the Certificate of Compliance, plans, and specifications approved by the enforcement agency.
- 4. I reviewed a copy of the Certificate of Compliance approved by the enforcement agency that identifies the specific requirements for the scope of construction or installation identified on this Certificate of Installation, and I have ensured that the requirements that apply to the construction or installation have been met.
- 5. I understand that a completed signed copy of this Certificate of Installation shall be made available with the building permit(s) issued for the building and shall be made available to the enforcement agency for all applicable inspections. I will take the necessary steps to fulfill this requirement.
- 6. I understand that a completed 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 take the necessary steps to fulfill this requirement.

Responsible Builder/Installer Name:	Responsible Builder/Installer Signature:	
Company Name: (Installing Subcontractor or General Contractor or Builder/Owner)	Position With Company (Title):	
Address:	CSLB License:	
City/State/Zip:	Phone:	Date Signed:

CERTIFICATE OF INSTALLATION - USER INSTRUCTIONS	NRCI-MCH-20-F
Duct Leakage Diagnostic Test	(Page 1 of 7)

NRCI-MCH-20-F User Instructions

A. System Information

- 1. HVAC System Identification or Name: This field is user input. It is referenced from the NRCI-MCH-E, which must be completed prior to this document.
- 2. HVAC System Location or Area Served: This field is user input. It is referenced from the NRCI-MCH-E, which must be completed prior to this document.
- 3. Indoor Unit Name: This field is user input. It is referenced from the NRCI-MCH-E, which must be completed prior to this document.
- 4. Building Type: This field is user input. It is referenced from the Certificate of Compliance (NRCC), which must be completed prior to this document.
- 5. Verified Low Leakage Ducts in Conditioned Space (VLLDCS): This field is user input. It is referenced from the Certificate of Compliance (NRCC), which must be completed prior to this document.
- 6. Verified Low Leakage Air-Handling Unit (VLLAHU) Credit This field is user input. It is referenced from the Certificate of Compliance (NRCC), which must be completed prior to this document.
- 7. Duct System Compliance Category: Choose from New, Replacement, Alteration, Replacement Using Smoke Test, Alteration Using Smoke Test.
 - a. New: Use this choice for newly constructed buildings, additions with all-new systems dedicated to the addition, or new systems installed in existing homes where the equipment is newly installed and the ducts are at least 75% or more newly installed duct material (up to 25% of the finished system may consist of reused parts from the dwelling unit's previously existing duct system, such as registers, grilles, boots, air handler, coil, plenums, duct material).
 - b. Replacement: For existing buildings where the equipment is not newly installed but the ducts are at least 75% or more newly installed duct material (up to 25% of the finished system may consist of reused parts from the dwelling unit's previously existing duct system, such as registers, grilles, boots, air handler, coil, plenums, duct material). Sometimes referred to as a "re-ducted" system.
 - c. Alteration: For existing buildings where any of the following are newly installed or replaced as part of the project and the system does not meet one of the other compliance categories:
 - 1. 25 feet of space-conditioning system ducts are installed in unconditioned space or indirectly conditioned space.
 - 2. Air conditioning or heat pump condenser
 - 3. Heating or cooling coil
 - 4. Air handler (e.g., furnace, fan coil, package unit)
 - d. Replacement using Smoke Test: Similar to "Replacement" but the target leakage could not be met due to the equipment not being new. Smoke is used to show that leaks are only coming from the previously existing equipment. All accessible leaks visible by smoke must be sealed.
 - e. Alteration using Smoke Test: Similar to "Alteration" but the target leakage could not be met due to the equipment not being new or due to inaccessible leaks. Smoke is used to show that leaks are only coming from the previously existing equipment or are inaccessible. All accessible leaks visible by smoke must be sealed.
- 8. Any portions of Duct Located in Garage: User select from Yes or No.

CERTIFICATE OF INSTALLATION - USER INSTRUCTIONS	NRCI-MCH-20-F
Duct Leakage Diagnostic Test	(Page 2 of 7)

B1. Duct Leakage Diagnostic Test for Completely New Duct System

- 1. Air-Handling Unit Airflow (AHU Airflow) Determination Method: User will select from the following options:
 - a. Default Airflow Method: The Default Airflow Method may only be used for homes where the duct system is being tested before the conditioning and heating system is installed and the equipment specification is not known (See Section RA3.1.4.2.1 of the 2025 Reference Appendices).
 - b. Cooling System Method: For systems with air conditioning, this selection must be made, and the nominal air handler airflow shall be 400 CFM per nominal ton of condensing unit cooling capacity as specified by the manufacturer
 - c. Heating System Method: For heating only systems the nominal air-handler airflow shall be 21.7 CFM per kBtu/h of rated heating output capacity.
 - d. Measured Airflow Method: The measured system airflow can be used as the air-handler airflow for the purpose of establishing duct leakage percentage (See Section RA3.1.4.2.3 of the 2025 Reference Appendices).
 - e. Indoor Unit Method
- 2. Condenser Nominal Cooling Capacity (ton): Same data given on MCH-01.
- 3. Indoor Unit Nominal Cooling Capacity: Same data given on MCH-01.
- 4. Heating Capacity (kBtu/h): Same data given on MCH-01;
- 5. Conditioned Floor Area Served by this HVAC System (ft²): User must input CFA for the space. Should be consistent with the NRCC input value.
- 6. Measured AHU Airflow (CFM): If "Measured Airflow Method" is selected, user must input measured airflow.
- 7. Duct Leakage Test Conditions: Select from the following options:
 - a. Test Rough-in AHU: Installers may determine duct leakage in new construction by using diagnostic measurements at rough-in building construction stage prior to installation of interior finishing (See Section RA3.1.4.3.2 of the 2025 Reference Appendices). In this case the air-handling unit (AHU) is installed at the time of test.
 - b. Test Rough-in No AHU: Same as "Test Rough-in" except air handling unit is not yet installed (See Section RA3.1.4.3.2 of the 2025 Reference Appendices).
 - c. Test Final: Test conducted at "final", i.e. all equipment, ducts, and registers are installed and the system is essentially in its final operating condition. (rough-in no longer an option. See Section RA3.1.4.3.1 of the 2025 Reference Appendices).
- 8. Duct Leakage Test Method: Select from the following options: Leakage to the Outside (house is pressurized simultaneously with the ducts such that only leakage going outside of the pressurized conditioned shell is measured, see RA3.1.4.3.4), or Total Leakage.
- 9. Leakage Factor: This field is automatically filled out based on choices in previous fields.
- 10. Calculated Target Allowable Duct Leakage Rate (cfm): This value will be automatically calculated based on values entered in previous fields.
- 11. Actual Duct Leakage Rate from Leakage Test Measurement (cfm): Input the duct leakage rater taken from actual test measurements.

CERTIFICATE OF INSTALLATION - USER INSTRUCTIONS	NRCI-MCH-20-F
Duct Leakage Diagnostic Test	(Page 3 of 7)

12. Compliance Statement: If Actual Duct Leakage Rate from leakage test (B10) is less than or equal to Calculated Target Allowable Duct Leakage Rate, "System passes leakage test" will automatically populate. If not, "System fails leakage test" will automatically populate.

B2. Duct Leakage Diagnostic Test - Low Leakage Ducts in Conditioned Space

- 1. System compliance with visual inspection per RA3.1.4.1.3: This field will be automatically filled. A visual inspection confirms the space conditioning system is located entirely in conditioned space in accordance with RA3.1.4.1.3. If any part of the duct system is outside of conditioned space, the system does not pass.
- 2. Duct Leakage Test Conditions: This field will be automatically filled. The entire duct system shall be included in the total leakage test. The air handler, supply and return plenums and all the connectors, transition pieces, duct boots and registers must be installed and tested to total system leakage. All supply registers shall be taped so that the tape goes over the grills and attaches to the surrounding drywall. All return grilles except for one large centrally located return grille or the air handler cabinet access panel shall be taped up.
- 3. Duct Leakage Test Method: This field will be automatically filled. Leakage to outside shall be verified by pressurizing the dwelling and the ducts to 25 Pa (0.1 inches of water) with respect to outside. A full description of these procedures can be found in RA3.1.4.3.4.
- 4. Target Allowable Duct Leakage Rate (cfm): This field will be automatically filled. In order to pass this test duct leakage must be equal to or less than 25 cfm when the dwelling and ducts are pressurized to 25 Pa with respect to outside.
- 5. Actual Duct Leakage Rate from Leakage Test Measurement (cfm): Input the duct leakage rate taken from actual test measurements.
- 6. Compliance statement: This field will be automatically filled. The test passes if actual leakage rate is less than or equal to 25 cfm.

B3. Duct Leakage Diagnostic Test - Low Leakage Air-Handling Unit (LLAHU)

- 1. Air-Handling Unit Airflow (AHU Airflow) Determination Method: User will select from the following options:
 - a. Cooling System Method: For systems with cooling, this selection must be made, and the nominal air handler airflow shall be 400 CFM per nominal ton of condensing unit cooling capacity as specified by the manufacturer or the heating only value, whichever is greater (See Section RA3.1.4.2.2 of the 2025 Reference Appendices).
 - b. Heating System Method: For heating only systems the nominal air handler airflow shall be 21.7 CFM per kBtu/h of rated heating output capacity.
 - c. Measured Airflow Method: The system airflow can be used as the air-handler airflow for the purpose of establishing duct leakage percentage (See Section RA3.1.4.2.3 of the 2025 Reference Appendices).
 - d. Default Airflow Method: The Default Airflow Method may only be used for homes where the duct system is being tested before the conditioning and heating system is installed and the equipment specification is not known (See Section RA3.1.4.2.1 of the 2025 Reference Appendices).
 - e. Indoor Unit Method
- 2. Condenser Nominal Cooling Capacity (ton): Same data given on MCH-01.
- 3. Indoor Unit Nominal Cooling Capacity: Same data given on MCH-01.
- 4. Heating Capacity (kBtu/h): Same data given on MCH-01;

CERTIFICATE OF INSTALLATION - USER INSTRUCTIONS	NRCI-MCH-20-F
Duct Leakage Diagnostic Test	(Page 4 of 7)

- 5. Conditioned Floor Area Served by this HVAC System (ft²): User will input CFA for zone which should be consistent with the value from the NRCC. User will have the option to leave this field blank because the zone CFA is only required for the default airflow calculation.
- 6. Measured AHU Airflow (cfm): If "Measured Airflow Method" is selected, user must input measured airflow.
- 7. Duct Leakage Test Conditions: User must select from the following options:
 - a. Test Final: Test conducted at final inspection (testing at rough is not an option with this test. See Section RA3.1.4.3.1 of the 2025 Reference Appendices).
- 8. Duct Leakage Test Method: User will select from the following options: Total Leakage.
- 9. Leakage Factor: Value will be automatically populated in NRCC.
- 10. Calculated Target Allowable Duct Leakage Rate (cfm): This value will be automatically populated depending on values in B06, B07, and B08.
- 11. Actual Duct Leakage Rate from Leakage Test Measurement (cfm): User will input this value from actual measurements from leakage test.
- 12. Air-Handling Unit Manufacturer Name: This will be automatically populated from information entered in the MCH-01.
- 13. Air-Handling Unit Model Number: This will be automatically populated from information entered in the MCH-01.
- 14. Compliance Statement: If Actual Duct Leakage Rate from leakage test is less than or equal to Calculated Target Allowable Duct Leakage Rate, "System passes leakage test" will automatically populate. If not, "System fails leakage test will automatically populate.

B4. Duct Leakage Diagnostic Test - Complete Replacement or Altered Duct System

- 1. Air-Handling Unit Airflow (AHU Airflow) Determination Method: User will select from the following options:
 - a. Default Airflow Method: The Default Airflow Method may only be used for homes where the duct system is being tested before the conditioning and heating system is installed and the equipment specification is not known (See Section RA3.1.4.2.1 of the 2025 Reference Appendices).
 - b. Cooling System Method: For systems with air conditioning, this selection must be made, and the nominal air handler airflow shall be 400 CFM per nominal ton of condensing unit cooling capacity as specified by the manufacturer (Note: the heating only value may be used, if higher, See Section RA3.1.4.2.2 of the 2025 Reference Appendices).
 - c. Heating System Method: For heating only systems the nominal air handler airflow shall be 21.7 CFM per kBtu/h of rated heating output capacity.
 - d. Measured Airflow Method: The measured system airflow can be used as the air handler airflow for the purpose of establishing duct leakage percentage (See Section RA3.1.4.2.3 of the 2025 Reference Appendices).
 - e. Indoor Unit Method
- 2. Condenser Nominal Cooling Capacity (ton): Same data given on MCH-01.
- 3. Indoor Unit Nominal Cooling Capacity: Same data given on MCH-01.
- 4. Heating Capacity (kBtu/h): Same data given on MCH-01.

CERTIFICATE OF INSTALLATION - USER INSTRUCTIONS	NRCI-MCH-20-F
Duct Leakage Diagnostic Test	(Page 5 of 7)

- 5. Conditioned Floor Area Served by this HVAC System (ft²): User must input CFA for the space. Should be consistent with the NRCC input value.
- 6. Measured AHU Airflow (CFM): If "Measured Airflow Method" is selected, user must input measured airflow.
- 7. Duct Leakage Test Conditions: Select from the following options:
 - a. Test Rough-in AHU: Installers may determine duct leakage in new construction by using diagnostic measurements at rough-in building construction stage prior to installation of interior finishing (See Section RA3.1.4.3.2 of the 2025 Reference Appendices). In this case the air handling unit (AHU) is installed at the time of test.
 - b. Test Rough-in No AHU: Same as "Test Rough-in" except air handling unit is not yet installed (See Section RA3.1.4.3.2 of the 2025 Reference Appendices).
 - c. Test Final: Test conducted at "final", i.e. all equipment, ducts, and registers are installed and the system is essentially in its final operating condition. (rough-in no longer an option. See Section RA3.1.4.3.1 of the 2025 Reference Appendices).
- 8. Duct Leakage Test Method: Select from the following options: Leakage to the Outside (house is pressurized simultaneously with the ducts such that only leakage going outside of the pressurized conditioned shell is measured, see RA3.1.4.3.4), or Total Leakage.
- 9. Leakage Factor: This field is automatically filled out based on choices in previous fields.
- 10. Calculated Target Allowable Duct Leakage Rate (cfm): This value will be automatically calculated based on values entered in previous fields.
- 11. Actual Duct Leakage Rate from Leakage Test Measurement (cfm): Input the duct leakage rater taken from actual test measurements.
- 12. Compliance Statement: If Actual Duct Leakage Rate from leakage test is less than or equal to Calculated Target Allowable Duct Leakage Rate, "System passes leakage test" will automatically populate. If not, "System fails leakage test" will automatically populate.

B5. Duct Leakage Diagnostic Test - Sealing All Accessible Leaks using Smoke Test

- 1. Air-Handling Unit Airflow (AHU Airflow) Determination Method: User will select from the following options:
 - a. Default Airflow Method: The Default Airflow Method may only be used for homes where the duct system is being tested before the conditioning and heating system is installed and the equipment specification is not known (See Section RA3.1.4.2.1 of the 2025 Reference Appendices).
 - b. Cooling System Method: For systems with air conditioning, this selection must be made, and the nominal air handler airflow shall be 400 CFM per nominal ton of condensing unit cooling capacity as specified by the manufacturer (Note: the heating only value may be used, if higher, See Section RA3.1.4.2.2 of the 2025 Reference Appendices).
 - c. Heating System Method: For heating only systems the nominal air handler airflow shall be 21.7 CFM per kBtu/h of rated heating output capacity.
 - d. Measured Airflow Method: The measured system airflow can be used as the air handler airflow for the purpose of establishing duct leakage percentage (See Section RA3.1.4.2.3 of the 2025 Reference Appendices).
 - e. Indoor Unit Method

- 2. Condenser Nominal Cooling Capacity (ton): Same data given on MCH-01.
- 3. Indoor Unit Nominal Cooling Capacity: Same data given on MCH-01.
- 4. Heating Capacity (kBtu/h): Same data given on MCH-01.
- 5. Conditioned Floor Area Served by this HVAC System (ft²): User must input CFA for the space. Should be consistent with the NRCC input value.
- 6. Measured AHU Airflow (CFM): If "Measured Airflow Method" is selected, user must input measured airflow.
- 7. Duct Leakage Test Conditions: Select from the following options:
 - a. Test Rough-in AHU: Installers may determine duct leakage in new construction by using diagnostic measurements at rough-in building construction stage prior to installation of interior finishing (See Section RA3.1.4.3.2 of the 2025 Reference Appendices). In this case the air-handling unit (AHU) is installed at the time of test.
 - b. Test Rough-in No AHU: Same as "Test Rough-in" except air handling unit is not yet installed (See Section RA3.1.4.3.2 of the 2025 Reference Appendices).
 - c. Test Final: Test conducted at "final", i.e. all equipment, ducts, and registers are installed and the system is essentially in its final operating condition. (rough-in no longer an option. See Section RA3.1.4.3.1 of the 2025 Reference Appendices).
- 8. Duct Leakage Test Method: Select from the following options: Leakage to the Outside (house is pressurized simultaneously with the ducts such that only leakage going outside of the pressurized conditioned shell is measured, see RA3.1.4.3.4), or Total Leakage.
- 9. Leakage Factor: This field is automatically filled out based on choices in previous fields.
- 10. Calculated Target Allowable Duct Leakage Rate (cfm): This value will be automatically calculated based on values entered in previous fields.
- 11. Actual Duct Leakage Rate from Leakage Test Measurement (cfm): Input the duct leakage rater taken from actual test measurements.
- 12. Compliance Statement: If Actual Duct Leakage Rate is less than or equal to Calculated Target Allowable Duct Leakage Rate, "system passes system complies with Allowable Duct Leakage Rate Criterion" will automatically populate.

If measured leakage is greater than allowable duct leakage rate, then the following will automatically populate:

"System passes using smoke test of an altered HVAC system in an existing building

- No visible smoke exits the accessible portions of the duct system.
- Smoke is only emanating from air handler unit (AHU cabinet and non-accessible portions of the duct system.

Note: Accessible is defined as having access thereto, but which first may require removal or opening of access panels, doors, or moving similar obstructions. If access to the ducts requires an object to be demolished or deconstructed, then sealing of those ducts is not required.

C. Ducts Located in Garage Spaces

- 1. Duct Leakage Test Method: This field is automatically filled out based on choices in previous fields.
- 2. Leakage Factor: This field is automatically filled out based on choices in previous fields.

CERTIFICATE OF INSTALLATION - USER INSTRUCTIONS	NRCI-MCH-20-F
Duct Leakage Diagnostic Test	(Page 7 of 7)

- 3. Air-Handling Unit Airflow (AHU Airflow) Determination Method: This field is automatically filled out based on choices in previous fields.
- 4. Measured AHU Airflow (CFM): This field is automatically filled out based on choices in previous fields.
- 5. Calculated Target Allowable Duct Leakage Rate (cfm): This value will be automatically calculated based on values entered in previous fields
- 6. Actual Duct Leakage Rate from Leakage Test Measurement (cfm): This field is automatically filled out based on choices in previous fields
- 7. Compliance Statement: If Actual Duct Leakage Rate from leakage test is less than or equal to Calculated Target Allowable Duct Leakage Rate, passes message will automatically populate. If not, "System fails leakage test" will automatically populate.

D. Additional Requirements for Compliance

- 1. This field must be a true statement (or not applicable) for the system to comply.
- 2. This field must be a true statement (or not applicable) for the system to comply.
- 3. This field must be a true statement (or not applicable) for the system to comply.
- 4. This field must be a true statement (or not applicable) for the system to comply.
- 5. This field must be a true statement (or not applicable) for the system to comply.
- 6. This field must be a true statement (or not applicable) for the system to comply.
- 7. This field must be a true statement (or not applicable) for the system to comply.
- 8. This field must be a true statement (or not applicable) for the system to comply.
- 9. This field must be a true statement (or not applicable) for the system to comply.
- 10. This field must be a true statement (or not applicable) for the system to comply.
- 11. This field must be a true statement (or not applicable) for the system to comply.

Documentation Declaration Statements

- 1. The person who prepared the NRCI will sign and complete the fields for their name, company (if applicable), address, phone number, certification information (if applicable), date and signature.
- 2. The person who is assuming responsibility for the project being built to comply with Title 24, Part 6, will complete the fields for their name, company (if applicable), address, phone number, license number (if applicable), date and signature.