



| Project Name and Address | Authority Having Jurisdiction |
|---------------------------|-------------------------------|
| Name: Project Name | Enforcement Agency: Agency |
| Address: Project Address | Permit Number: Permit Number |
| City, Zip: City, Zip Code | Permit Application Date: Date |

| | | | |
|-----------------------|--------------------|-------------------|--------------------|
| Building: Enter Value | Floor: Enter Value | Room: Enter Value | Control/tag: Value |
|-----------------------|--------------------|-------------------|--------------------|

| | |
|--------------------------------------------------------------------------------|-----------------------------|
| <input type="checkbox"/> Construction inspection and functional testing comply | Date Submitted to AHJ: Date |
| <input type="checkbox"/> Does not comply | |

| | |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Intent: | Verify that the air-cooled condenser has ambient dry-bulb following control and fan motor variable speed control. Reference NRCC-PRC-E or NRCC-MCH-E for nonresidential (including nonresidential spaces in high-rise multifamily) building permits or LMCC-MCH-E for nonresidential spaces in low-rise multifamily building permits . Submit one Certificate of Acceptance for each system that must demonstrate compliance. Reference Sections 120.6(a)4, 120.6(a)7D, 140.4(h), 170.2(c)4F, and NA7.10.3.2. |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Table A: Construction Inspection

Prior to functional testing, verify and document all of the following:

| Step | Entry | Item | Code Reference |
|------|----------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| 1.0 | <input type="checkbox"/> Pass <input type="checkbox"/> Fail | The minimum condensing temperature control setpoint is at or below 70°F. | NA7.10.3.2.1(a) |
| 2.0 | <input type="checkbox"/> Pass <input type="checkbox"/> Fail | The master system controller saturated condensing temperature input is the temperature equivalent reading of the condenser pressure sensor. | NA7.10.3.2.1(b) |
| 3.0 | <input type="checkbox"/> Pass <input type="checkbox"/> Fail | All drain leg pressure regulator valves are set below the minimum condensing temperature/pressure setpoint. | NA7.10.3.2.1(c) |
| 4.0 | <input type="checkbox"/> Pass <input type="checkbox"/> Fail | Receiver pressurization valves, such as the outlet pressure regulator (OPR), (if used) are set lower than the drain leg pressure regulator valve setting. | NA7.10.3.2.1(d) |
| 5.0 | <input type="checkbox"/> Pass <input type="checkbox"/> Fail | All condenser inlet and outlet pressure sensors read accurately (or provide an appropriate offset) using a pressure standard. | NA7.10.3.2.1(e) |
| 6.0 | <input type="checkbox"/> Pass <input type="checkbox"/> Fail | All ambient dry bulb temperature sensors read accurately (or provide an appropriate offset) using a temperature standard. | NA7.10.3.2.1(f) |
| 7.0 | <input type="checkbox"/> Pass <input type="checkbox"/> Fail | Temperature sensor used by the controller is mounted in a location that is not exposed to direct sunlight. | NA7.10.3.2.1(g) |
| 8.0 | <input type="checkbox"/> Pass <input type="checkbox"/> Fail | All sensor readings used by the condenser controller convert or calculate to the correct conversion units at the controller. | NA7.10.3.2.1(h) |
| 9.0 | <input type="checkbox"/> Pass <input type="checkbox"/> Fail | All condenser fan motors are operational and rotating in the correct direction. | NA7.10.3.2.1(i) |



| Step | Entry | Item | Code Reference |
|--------------|----------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| 10. <u>0</u> | <input type="checkbox"/> Pass <input type="checkbox"/> Fail | All condenser fan speed controls are operational and connected to condenser fan motors to operate in unison the fans serving a common condenser loop. | NA7.10.3.2.1(j) |
| 11. <u>0</u> | <input type="checkbox"/> Pass <input type="checkbox"/> Fail | All speed controls are in "auto" mode. | NA7.10.3.2.1(k) |
| 12. <u>0</u> | <input type="checkbox"/> Pass <input type="checkbox"/> Fail | Check "Pass" if construction inspection complies with all requirements. Check "Fail" if construction inspection does not comply with all requirements. | N/A |

Table B: Functional Testing

The system cooling load must be sufficiently high to run the test (i.e. with a condensing temperature above the minimum SCT set point). The loads can often be increased somewhat as required to perform the Functional Testing.

| Step | Entry | Functional Test | Code Reference |
|-------------|--------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| 1.0 | No Entry | Override any conflicting controls before performing functional tests. | NA7.10.3.2.2 Step 1 |
| 1.1 | Enter Value °F | Current <u>outdoor</u> ambient dry-bulb temperature (DBT). | NA7.10.3.2.2 Step 1 |
| 1.2 | Enter Value <input type="checkbox"/> °F <input type="checkbox"/> psig | Current saturated condensing temperature (SCT) or condensing pressure from the control system. | NA7.10.3.2.2 Step 1 |
| 2.0 | No Entry | Calculate and document the following. | NA7.10.3.2.2 Step 2 |
| 2.1 | Enter Value | Calculate the actual condenser temperature difference (Actual -TD) <u>=</u> [SCT – DBT]. (°F) | NA7.10.3.2.2 Step 2 |
| 2.2 | Enter Value <input type="checkbox"/> °F <input type="checkbox"/> psig | Current SCT or pressure control set point. | NA7.10.3.2.2 Step 2 |
| 3. <u>0</u> | No Entry | <u>Depending on the control strategy used, program a setpoint equal to the calculation obtained in Step 2.1 or the value in step 2.2. Set the Control TD set point to the Actual TD obtained in Step 2.</u> This will be referred to as the "test set point." Allow 5 minutes for condenser fan speed to normalize. | NA7.10.3.2.2 Step 3 |
| 4. <u>0</u> | No Entry | Using the control system, raise the test set point in 1°F (<u>or 3 psi</u>) increments until the condenser fan control modulates to minimum fan motor speed. <u>Verify and document the following:</u> | NA7.10.3.2.2 Step 4 |
| 4.1 | <input type="checkbox"/> Pass <input type="checkbox"/> Fail | Fan motor speed decreases <u>s</u> . | NA7.10.3.2.2 Step 4(a) |
| 4.2 | <input type="checkbox"/> Pass <input type="checkbox"/> Fail | All condenser fan motors serving common condenser loop decrease speed in unison in response to controller output; observed at the control system and at the condenser(s). | NA7.10.3.2.2 Step 4(b) |



| Step | Entry | Functional Test | Code Reference |
|------------|------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|
| 4.3 | Enter Value <input type="checkbox"/> rpm <input type="checkbox"/> hertz <input type="checkbox"/> % full speed | Record the minimum fan motor control speed. Enter with units as rpm, Hertz, or percent of full speed. | NA7.10.3.2.2 Step 4(c) |
| <u>4.4</u> | <u>No Entry</u> | <u>If system is already operating at minimum saturated condensing temperature/head pressure, reverse Steps 4 and 5.</u> | <u>NA7.10.3.2.2 Step 4(d)</u> |
| <u>5.0</u> | No Entry | Using the control system, lower the test set point in 1°F (<u>or 3 psi</u>) increments until the condenser fan control modulates to increase fan motor speed. <u>Verify and document the following:</u> | NA7.10.3.2.2 Step 5 |
| 5.1 | <input type="checkbox"/> Pass <input type="checkbox"/> Fail | Fan motor speed increases. | NA7.10.3.2.2 Step 5(a) |
| 5.2 | <input type="checkbox"/> Pass <input type="checkbox"/> Fail | All condenser fan motors serving common condenser loop increase speed in unison in response to controller output; observed at the control system and at the condenser(s). | NA7.10.3.2.2 Step 5(b) |
| <u>6.0</u> | No Entry <u>Enter Value</u> | <u>Record the current minimum condensing temperature set point. (°F) Using the control system, change the minimum SCT set point to a value greater than the current operating SCT. Verify and document the following:</u> | NA7.10.3.2.2 Step 6 |
| 6.1 | Enter Value <u>No Entry</u> | <u>Using the control system, change the minimum SCT set point to a value greater than the current operating SCT. Verify and document the following: Record the current minimum condensing temperature set point. (°F)</u> | NA7.10.3.2.2 Step 6 |
| 6.2 | <input type="checkbox"/> Pass <input type="checkbox"/> Fail | Condenser fan controls modulate to decrease capacity. | NA7.10.3.2.2 Step 6(a) |
| 6.3 | <input type="checkbox"/> Pass <input type="checkbox"/> Fail | All condenser fans serving common condenser loop modulate in unison. | NA7.10.3.2.2 Step 6(b) |
| 6.4 | <input type="checkbox"/> Pass <input type="checkbox"/> Fail | Condenser fan controls stabilize within a 5-minute period. | NA7.10.3.2.2 Step 6(c) |
| <u>7.0</u> | No Entry | Restore the Control TD and the minimum SCT set point to the values recorded in Step 2.2 and 6.1. | NA7.10.3.2.2 Step 7 |
| <u>8.0</u> | No Entry | Restore any controls overridden in Step 1. | NA7.10.3.2.2 Step 8 |
| <u>9.0</u> | <input type="checkbox"/> Pass <input type="checkbox"/> Fail | Check Pass if Functional Test Compliance Results complies. <u>Check fail if any Functional Tests do not comply with all requirements.</u> | NA7.10.3.2.2 Step 8 |



| Declaration Statement | Signatory |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
| Document Author I assert that this Certificate of Acceptance documentation is accurate and complete | Name Company Name Author Signature Date Signed |
| Field Technician I assert the following under penalty of perjury, under the laws of the State of California: The information provided on this Certificate of Acceptance is true and correct. I am the person who performed the acceptance verification reported on this Certificate of Acceptance (Field Technician). The construction or installation identified on this Certificate of Acceptance complies with the applicable acceptance requirements indicated in the plans and specifications approved by the enforcement agency and conforms to the applicable acceptance requirements and procedures specified in Reference Nonresidential Appendix NA7. I have confirmed that the Certificate(s) of Installation for the construction or installation identified on this Certificate of Acceptance has been completed and signed by the responsible builder/installer and has been posted or made available with the building permit(s) issued for the building. | Name Company Name ATT No.: ATT Cert. No. Title Phone Signature Date Signed |
| Responsible Person I assert the following under penalty of perjury, under the laws of the State of California: I am the Field Technician, or the Field Technician is acting on my behalf as my employee or my agent and I have reviewed the information provided on this Certificate of Acceptance. 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 Acceptance and attest to the declarations in this statement (responsible acceptance person). The information provided on this Certificate of Acceptance substantiates that the construction or installation identified on this Certificate of Acceptance complies with the acceptance requirements indicated in the plans and specifications approved by the enforcement agency and conforms to the applicable acceptance requirements and procedures specified in Reference Nonresidential Appendix NA7. I have confirmed that the Certificate(s) of Installation for the construction or installation identified on this Certificate of Acceptance has been completed and is posted or made available with the building permit(s) issued for the building. I understand that a completed, signed copy of this Certificate of Acceptance 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, and I will take the necessary steps to ensure this requirement is accomplished. I understand that a signed copy of this Certificate of Acceptance is required to be included with the documentation the builder provides to the building owner at occupancy, and I will take the necessary steps to ensure this requirement is accomplished. | Name Company Name Lic. No.: License No. Title Phone Signature Date Signed |