PREFACE

The following manual outlines the procedures and policies of the Performance Certification Program for Mechanical Transport Refrigeration (TR) operated by the Air-Conditioning, Heating, and Refrigeration Institute (AHRI). This manual is to be used in conjunction with the AHRI General Operations Manual for AHRI Certification Programs. Where the AHRI General Operations Manual and this product-specific manual differ, this product-specific operations manual shall prevail.

The revision of this manual supersedes all previous revisions. The current edition of this manual, as well as the AHRI General Operations Manual, can be accessed through the AHRI website, www.ahrinet.org.

The TR Certification Program by AHRI provides for independent verification of the Mechanical Transport Refrigeration manufacturers’ stated equipment performance. Safety criteria are not within the scope of this program.

Participation in the program is voluntary. Any manufacturer, regardless of AHRI membership, may obtain approval of Program Ratings and use of the AHRI TR Certification Mark hereinafter referred to as the “Mark”. The Mark is the Participant’s public representation that the ratings of randomly selected samples have been verified by an independent laboratory in accordance with test procedures prescribed by this operations manual. A Certification Agreement is executed between the manufacturer and AHRI specifying the conditions under which such Ratings and the Mark may be used. No manufacturer has the right to use Program Ratings or to state that their products have been tested in conformance with the procedures outlined in this Rating Procedure unless and until they have received written authority from AHRI to use the Mark as applied to the specific approved Program Ratings.

This Operations Manual has been prepared to assure that administration of the program is carried out in a uniform manner. It is an amplification of the Certification Agreement signed by licensees and AHRI. General information, procedural details, and copies of forms are included in this Operations Manual. Provisions of the Operations Manual may be amended as provided in the Certification Agreement.

Note:

This manual supersedes Mechanical Transport Refrigeration Units Operations Manual, August 2006
# CERTIFICATION OPERATIONS MANUAL FOR MECHANICAL TRANSPORT REFRIGERATION

## TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>SECTION</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1</strong> Program Overview</td>
<td></td>
</tr>
<tr>
<td>1.1 Applicable Rating Standard</td>
<td>1</td>
</tr>
<tr>
<td>1.2 Product Definitions</td>
<td>1</td>
</tr>
<tr>
<td>1.2.1 Mechanical Transport Refrigeration Unit</td>
<td>1</td>
</tr>
<tr>
<td>1.2.2 Speed-Governed Transport Refrigeration Unit</td>
<td>1</td>
</tr>
<tr>
<td>1.2.3 Forced-Circulation Air-Cooler</td>
<td>1</td>
</tr>
<tr>
<td>1.3 Program Scope</td>
<td>1</td>
</tr>
<tr>
<td>1.3.1 Program Scope Exclusions</td>
<td>1</td>
</tr>
<tr>
<td>1.4 Intended Market</td>
<td>1</td>
</tr>
<tr>
<td>1.5 Basic Model Groups (BMGs)</td>
<td>1</td>
</tr>
<tr>
<td><strong>2</strong> Qualification Process</td>
<td></td>
</tr>
<tr>
<td>2.1 Original Equipment Manufacturer (OEM) Applicants</td>
<td></td>
</tr>
<tr>
<td>STEP 2.1.1 Certification Application Package</td>
<td>2</td>
</tr>
<tr>
<td>STEP 2.1.2 Processing Application Package</td>
<td>2</td>
</tr>
<tr>
<td>STEP 2.1.2.1 Performance Certification Agreement for Original Equipment Manufacturer (OEM Agreement)</td>
<td>2</td>
</tr>
<tr>
<td>STEP 2.1.2.2 Participation and Licensing Fee Invoice</td>
<td>2</td>
</tr>
<tr>
<td>STEP 2.1.3 Selection and Acquisition of Test Samples</td>
<td>2</td>
</tr>
<tr>
<td>STEP 2.1.3.1 Number of Qualification Tests</td>
<td>2</td>
</tr>
<tr>
<td>STEP 2.1.3.2 Acquisition of Qualification Test Samples/Selection Criteria</td>
<td>2</td>
</tr>
<tr>
<td>STEP 2.1.3.3 Facility Approval and Sample Selection</td>
<td>2</td>
</tr>
<tr>
<td>STEP 2.1.4 Qualification Testing</td>
<td>3</td>
</tr>
<tr>
<td>STEP 2.1.4.1 Successful Completion of All Qualification Tests</td>
<td>3</td>
</tr>
<tr>
<td>STEP 2.1.4.2 First Sample Qualification Test Failure</td>
<td>3</td>
</tr>
<tr>
<td>STEP 2.1.4.3 Second Sample Qualification Test Failure</td>
<td>3</td>
</tr>
<tr>
<td>STEP 2.1.5 Welcome to the Program</td>
<td>3</td>
</tr>
<tr>
<td>2.2 Private Brand Marketer (PBM) Applicants</td>
<td></td>
</tr>
<tr>
<td>STEP 2.2.1 Certification Application Package</td>
<td>3</td>
</tr>
<tr>
<td>STEP 2.2.2 Processing Application Package</td>
<td>3</td>
</tr>
<tr>
<td>STEP 2.2.2.1 Performance Certification Agreement for Private Brand Manufacturer (PBM Agreement)</td>
<td>3</td>
</tr>
<tr>
<td>STEP 2.2.2.2 OEM Agreement on behalf of the PBM Applicant</td>
<td>3</td>
</tr>
<tr>
<td>STEP 2.2.2.3 Licensing Fee Invoice</td>
<td>3</td>
</tr>
<tr>
<td>STEP 2.2.3 Welcome to the Program</td>
<td>3</td>
</tr>
<tr>
<td><strong>3</strong> Equipment Selection and Testing</td>
<td></td>
</tr>
<tr>
<td>3.1 Annual Testing Requirement</td>
<td>3</td>
</tr>
<tr>
<td>3.2 Location of Tests</td>
<td>3</td>
</tr>
<tr>
<td>3.3 Witness Testing Procedures and Operations</td>
<td>4</td>
</tr>
<tr>
<td>3.3.1 Application for Witness Testing</td>
<td>4</td>
</tr>
<tr>
<td>3.3.1.1 Acknowledgement of Request</td>
<td>4</td>
</tr>
<tr>
<td>3.3.2 Inspection of Witness Test Facility</td>
<td>4</td>
</tr>
<tr>
<td>3.3.2.1 Non-Compliant Inspection Results</td>
<td>4</td>
</tr>
<tr>
<td>3.3.2.2 Final Approval of Witness Test Facility</td>
<td>4</td>
</tr>
<tr>
<td>3.3.3 Scheduled Witness Test Facility Re-approval</td>
<td>4</td>
</tr>
</tbody>
</table>
1. Program Overview

1.1 Applicable Rating Standard. It is mandatory for program Participants to comply with the provisions of the latest edition of AHRI Standard 1110, Mechanical Transport Refrigeration Units (Standard). A copy of the Standard is available for download from the AHRI website, www.ahrinet.org.

1.2 Product Definitions.

1.2.1 Mechanical Transport Refrigeration Unit. A combination of one (1) or more of the following factory-made assemblies:

- A compressor, drive, and condenser combination;
- A single Forced-Circulation Air-Cooler;
- All necessary refrigerant lines and electrical wiring; and
- Means whereby the unit can be suitably mounted and installed on a vehicle which it is intended to serve.

Where such equipment is used in more than one (1) assembly, the individual assemblies are designed to be used together, and the requirements of rating outlined in the Standard are based on the use of matched assemblies.

1.2.2 Speed-Governed Transport Refrigeration Unit. A Mechanical Transport Refrigeration Unit whose drive is designed to operate at a governed (constant), although possibly multiple, speed.

1.2.3 Forced-Circulation Air-Cooler. A factory-made assembly including means for forcing air circulation, and elements by which heat is transferred from air to refrigerant. The purpose of this unit is to transfer heat from a refrigerated space, through the medium of air, to the refrigerant.

1.3 Program Scope. This program applies to Production Models of Mechanical Transport Refrigeration Units, as defined in Section 1.2.

1.3.1 Program Scope Exclusions. The Mechanical Transport Refrigeration Program shall not apply to:

- Individual assemblies, such as condensing units or air-coolers, for separate use;
- Complete system that is field assembled and charged with refrigerant at the point of installation;
- Transport air-conditioners (automotive, bus or rail);
- Sea-going containers; and
- Refrigerated tankers.

1.4 Intended Market. The Intended Market for this certification program, where the Standard applies, includes all products defined in Section 1.3 that are sold for use in the U.S. and Canada (U.S., U.S. Territories, and Canada).

1.5 Basic Model Groups (BMGs). A Participant's listing shall be grouped by BMG. A BMG is a regular range of sizes of a similar type, design and construction, and having a common designation as catalogued. Mechanical Transport Refrigeration units are grouped into two BMGs:

- Self contained belt drive trailer refrigeration units; and
- Self contained belt drive truck refrigeration units.
2. Qualification Process

2.1 Original Equipment Manufacturer (OEM) Applicants. With the additions noted below, the OEM qualification process shall proceed according to the AHRI General Operations Manual, Section 4.

STEP 2.1.1 Certification Application Package. In addition to the Application for AHRI Certification and Annual Sales Volume Form noted in the AHRI General Operations Manual, Section 4, STEP 4.1, Applicants shall submit the following documentation to AHRI:

- Form TR-DS1,
- One test report for each BMG;
- If the Applicant chooses to conduct witness testing at its AHRI Approved Test Stand within a Facility (Facility), all required forms per Section 3.3.1 of this manual for Witness Testing Facility Approval shall also be submitted;

STEP 2.1.2 Processing Application Package.

STEP 2.1.2.1 Performance Certification Agreement for Original Equipment Manufacturer (OEM Agreement). No further action required beyond that listed in Section 4, STEP 4.2 of the AHRI General Operations Manual.

STEP 2.1.2.2 Participation and Licensing Fee Invoice. Payment of the Participation and Licensing Fee is due within 30 calendar days of the invoice issue date. Testing shall not be conducted until the invoice is paid in full. No further action required beyond that listed in Section 4, STEP 4.2 of the AHRI General Operations Manual.

STEP 2.1.3 Selection and Acquisition of Test Samples.

STEP 2.1.3.1 Number of Qualification Tests. 20% of an Applicant’s BMGs shall be tested with a minimum of two (2) models. Fractional numbers shall be rounded up to the next whole number.

STEP 2.1.3.2 Acquisition of Qualification Test Samples/Selection Criteria. Within 90 calendar days of a request from AHRI, the Applicant shall have samples available for selection. Samples shall be acquired in accordance with Section 3 of this manual.

STEP 2.1.3.3 Facility Approval and Sample Selection. If the Applicant has not yet applied to conduct witness testing at its facility, the Independent Third-Party Laboratory contracted by AHRI (Laboratory) shall contact the Applicant to schedule a preliminary witness test facility inspection. Upon final approval of the Applicant’s witness test facility and the approval of the Applicant’s computerized rating method(s) and/or paper catalogs, the Laboratory shall contact the Applicant to schedule initial qualification testing. Section 3 further explains the requirements and procedures for applying and conducting witness testing.

Qualification testing may be scheduled simultaneously with facility inspection; however, should the facility fail inspection the testing shall be delayed until the facility is brought into compliance.

If the Applicant has not applied to conduct witness testing at its facility, the qualification process shall continue with the approval of the Applicant’s Selection Rating Software and/or paper catalogs. Upon approval by AHRI, the Laboratory shall contact the Applicant to schedule initial qualification testing.
STEP 2.1.4 Qualification Testing. AHRI shall supply the Laboratory with the Published Ratings. The Laboratory shall conduct the testing of the samples in accordance with the Standard, against the Published Ratings.

STEP 2.1.4.1 Successful Completion of All Qualification Tests. If all qualification tests pass proceed to STEP 2.1.5.

STEP 2.1.4.2 First Sample Qualification Test Failure. Refer to Section 4, STEP 4.4.2 of the AHRI General Operations Manual for details regarding the first sample qualification failure options:

STEP 2.1.4.3 Second Sample Qualification Test Failure. Refer to Section 4, STEP 4.4.3 of the AHRI General Operations Manual for details regarding the second sample qualification failure options.

STEP 2.1.5 Welcome to the Program. No further action required beyond that listed in Section 4, STEP 4.5 of the AHRI General Operations Manual.

2.2 Private Brand Marketer (PBM) Applicants. With the additions noted below, the PBM qualification process shall proceed according to the AHRI General Operations Manual, Section 5.

PBM Applicants are not required to undergo qualification testing. PBM product certification is contingent upon the certification of the associated OEM product.

STEP 2.2.1 Certification Application Package. In addition to the Application for AHRI Certification Form noted in the AHRI General Operations Manual, Section 5, STEP 5.1, Applicants shall submit the following documentation to AHRI:

• Certified product data sheets noting PBM/OEM equipment match-ups

STEP 2.2.2 Processing Application Package.

STEP 2.2.2.1 Performance Certification Agreement for Private Brand Marketer (PBM Agreement). No further action required beyond that listed in Section 5, STEP 5.2.1 of the AHRI General Operations Manual.

STEP 2.2.2.2 OEM Agreement on Behalf of the PBM Applicant. No further action required beyond that listed in Section 5, STEP 5.2.2 of the AHRI General Operations Manual.

STEP 2.2.2.3 Licensing Fee Invoice. Payment of the Licensing Fee is due within 30 calendar days of the invoice issue date.

STEP 2.2.3 Welcome to the Program. No further action required beyond that listed in Section 5, STEP 5.3 of the AHRI General Operations Manual.

3. Equipment Selection and Testing

3.1 Annual Testing Requirement. 20% of a Participant’s BMGs shall be tested with a minimum of two (2) models. Fractional numbers shall be rounded to up to the next whole number.

3.2 Location of Tests. Testing shall be performed at an AHRI-Approved Test Facility (Facility) and the sample shall be installed in the test facility in accordance with the Participant’s published installation instructions in printed or electronic format.
The Participant shall elect to conduct testing at a Facility. The Facility shall be approved by AHRI prior to any test being conducted. Testing shall continue to be conducted at the Participant’s Facility, contingent upon it remaining AHRI-approved, or until the Participant notifies AHRI, in writing, of its desire to change facilities. All tests, regardless of location, shall be conducted or witnessed by the Laboratory’s Representative (Representative).

3.3 **Witness Testing Procedures and Operations.** This Certification Program allows witness testing; where Participant personnel, witnessed by the Representative, conducts testing at a Facility. Witness testing requirements are covered in the AHRI General Operations Manual, Section 9 and as specified below.

3.3.1 **Application for Witness Testing.** A Participant shall submit all of the following to AHRI:

- Form TR-WT1, Application for Witness Testing;
- Form TR-WT2, Personnel Experience Questionnaire;
- Form TR-WT3, Witness Testing Laboratory Inspection form;
- A complete list of all instruments and equipment being used to perform certification testing in accordance with applicable rating standard and a copy of each calibration report showing date of last calibration;
- A schematic drawing of the area of the test facility in which AHRI certification testing will be performed; and
- Photographs of the test facility in which AHRI certification testing will take place, which shall include sufficient views to show the location and connection of each instrument.

Electronic copies of these forms are available from AHRI.

3.3.1.1 **Acknowledgement of Request.** AHRI shall acknowledge receipt of the Participant’s application to conduct witness testing. AHRI shall review the material and shall inform the Participant if additional information and/or changes are required for the Facility to meet the Standard.

3.3.2 **Inspection of Witness Test Facility.** Following preliminary facility approval based on submitted data, the Representative shall inspect the Facility to verify compliance to the data submitted and to the certification program. Testing may be scheduled simultaneously with facility inspection; however, should the facility fail inspection, the testing shall be delayed until the facility is brought into compliance. The Representative shall complete applicable portions of Form TR-WT3.

3.3.2.1 **Non-Compliant Inspection Results.** If the results of the inspection indicate that the Facility is non-compliant with the certification program all discrepancies shall be resolved and resubmitted to AHRI, before approval can be granted to proceed with certified rating tests.

3.3.2.2 **Final Approval of Witness Test Facility.** Upon acceptable results of the inspection, AHRI shall notify the Facility of final acceptance and approval to proceed with certified ratings tests. AHRI shall provide the Participant with a certificate of approval that shall be displayed in the Facility.

3.3.3 **Scheduled Witness Test Facility Re-approval.** The Facility shall remain approved for no more than two (2) years. At this time, re-approval shall be required, including submittal of the documents outlined in Section 3.3.1 and inspection outlined in Section 3.3.2.

3.3.4 **Unscheduled Facility Re-approval.** Any changes that may affect a Facility’s ability to function per the certification program requirements, shall be required to be re-approved by the Laboratory personnel prior to conducting any witness testing. At this time, re-approval shall be
required, including submittal of the documents outlined in Section 3.3.1 and inspection outlined in Section 3.3.2.

3.3.5 **Witness Test Operations at a Facility.**

3.3.5.1 **Advance Set-Up of Sample in the AHRI-Approved Test Facility.** A Participant may set up the test sample in the Facility prior to the arrival of the Representative. Prior to test commencement, the Representative shall verify that the sample is the model selected by AHRI for testing and that the sample has been set up in the Facility in accordance with the Participant’s installation instructions and referenced method of test.

3.3.5.2 **Duty Assignments of Representative.** Sample testing, data acquisition, and data reduction shall be performed by the Participant personnel and assisted and witnessed by the Representative. Participant or Facility personnel shall be on-hand to assist the Representative as requested and are permitted to be present but are not permitted to tamper or adjust samples during tests, unless specifically approved by the Representative responsible for the test.

Verification of instrument application (in accordance with the procedures defined in the Standard) and verification of calibrations shall be performed by the Representative.

3.3.5.3 **Use of Laboratory Instrumentation.** The Representative shall use primary test instruments belonging to the Facility, in accordance with certification program requirements. The Laboratory shall provide secondary instrumentation to verify measured data. If the measurement(s) indicate that the Facility instrumentation accuracy may not be in accordance with the certification program requirements, AHRI shall be consulted and the issue resolved prior to conducting the test.

3.3.5.4 **Sample Start-Up and Operation.** Start-up and operation of the sample shall be in accordance with the sample’s installation and operation instructions.

3.4 **Selection of Test Samples.** AHRI shall make a Scheduled Production Model Selection based on data contained in the Directory. AHRI’s test selections shall be sent out no later than July 1st to ensure that first sample testing is completed within the calendar year. Refer to Section 9 of the AHRI General Operations Manual.

3.5 **Method of Acquiring Test Samples.** Selected samples shall be accompanied by the Participant’s published installation instructions in printed or electronic format or be available for Witness Testing at the Facility.

3.6 **Sample Acquisition Timeframe.** Upon notification of selections by AHRI, the Participant shall have 90 calendar days to conduct witness testing at the Facility. Prior to test, AHRI shall supply the Laboratory with the Published Ratings.

Upon notification of selections by AHRI, the Participant shall work with AHRI to determine mutually agreed upon test date which may require the Participant to accelerate product production.

3.7 **Certified Data.** In accordance with the Standard, the following certified ratings are verified by test:

- High Temperature Cooling Capacity, Btu/h [W];
- Low Temperature Cooling Capacity, Btu/h [W];
- Electric Standby High Temperature Cooling Capacity, Btu/h [W]; and
- Electric Standby Low Temperature Cooling Capacity, Btu/h [W].
3.8  **Test Failures.**

3.8.1  **Options Following 1st Sample Failure.** When the Participant is notified of a first sample certified rating failure, the Participant has seven (7) calendar days to select one of the following options:

- Claim the sample Defective, as described in the AHRI General Operations Manual, Section 9;
- Re-rate all models within the failed sample’s BMG proportionate to the failed test’s results;
- Test second sample of the same model (sample shall be available within the timeframe and procedure allotted in Section 3.5 following notification of decision to AHRI via Manufacturer’s Decision Form [MDF]); or
- Obsolete the model, which also obsoletes all models within the corresponding BMG.

3.8.2  **Options Following 2nd Sample Failure.** When the Participant is notified of a second-sample certified rating failure, the Participant has seven (7) calendar days to select one of the following options:

- Claim the sample Defective, as described in the AHRI General Operations Manual, Section 9;
- Re-rate all models within the failed sample’s BMG proportionate to the failed test’s results; or
- Obsolete the model, which also obsoletes all models within the corresponding BMG.

3.9  **Consequences for Improper Ratings.**

3.9.1  **Double Selection Mode Requirements.** Refer to Section 9 of the AHRI General Operations Manual.

3.9.2  **Probation Mode Requirements.** Refer to Section 9 of the AHRI General Operations Manual.

3.9.3  **Penalty Mode Requirements.** Refer to Section 9 of the AHRI General Operations Manual.

4.  **Challenge Tests**

Refer to Section 10 of the AHRI General Operations Manual.

5.  **AHRI Directory of Certified Product Performance**

All certified products shall be listed in the Directory, www.ahridirectory.org. Certification shall not be implied nor claimed for any product not listed in the Directory. Except as noted below, the Participant shall follow the steps outlined in Section 11 of the AHRI General Operations Manual.

5.1  **Publication of Ratings in Certified Directory.** The following information pertaining to each model certified shall be published in the Directory:

- AHRI Certified Reference Number;
- Name of Manufacturer;
- Trade Name;
- Model Status;
- Model Number(s) or Designation(s);
- Type (All Electric, Diesel Engine Driven, Electric Motor Driven, or Gas Engine Driven);
- Refrigerant Type;
- Standard Ratings;
  o High Temperature Refrigeration Capacity;
  o High Temperature Compressor Speed;
  o Low Temperature Refrigeration Capacity;
  o Low Temperature Compressor Speed;
- Electric Standby Ratings (If applicable);
  o High Temperature Refrigeration Capacity;
  o High Temperature Compressor Speed;
  o Low Temperature Refrigeration Capacity and
  o Low Temperature Compressor Speed.

5.1.1 Updating the Directory. AHRI shall ask the Participants to update their product data twice a year. AHRI shall publish the updated directory data by January and July of the program year.

5.2 Data Forms. Each Participant shall list its products by BMG. OEM and PBM Participants shall submit/edit product data via the Directory or data submittal sheets, as applicable.

6. Assessment and Payment of Certification Fees

Refer to Section 12 of the AHRI General Operations Manual.

7. Issuance of Violations and/or Termination

Refer to Section 14 of the AHRI General Operations Manual.

8. Program Hierarchy, Complaints, and the Appeals Process

Refer to Section 15 of the AHRI General Operations Manual.

9. Proper Use of the AHRI Certification Mark and Claims to Certification

Refer to the AHRI Brand Usage Manual.
## FORM TR-DS1

**AHRI MECHANICAL TRANSPORT REFRIGERATION UNIT CERTIFICATION PROGRAM DATA SHEET**

*(See Instructions on Reverse Side)*

<table>
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### Single Package No.
- **Model No.:**
- **Split Condensing Unit No.:**
- **System Evaporator Unit No.:**

### Trade Name
- SP, RCU

### SP, RCU
- D, G, GA, E

### Electric Standby?
- Yes

### Prototype or Production Model
- Production

### Basic Model Group (Truck or Trailer)
- **AHRI Standard Rating**
- **High Temperature**
  - Refrigerating Capacity * Btuh [W]
  - Compressor Speed rpm
  - Sat. Suct. Temp. at Comp. °F
  - Sat. Disch. Temp. at Comp. °F
  - Suct. Gas Temp. at Comp. °F
- **Low Temperature**
  - Refrigerating Capacity * Btuh [W]
  - Compressor Speed rpm
  - Sat. Suct. Temp. at Comp. °F
  - Sat. Disch. Temp. at Comp. °F
  - Suct. Gas Temp. at Comp. °F

### Standby Ratings (When applicable)
- Volts
- Cycles/Phase
- Elect. Input (High Temp.) watts
- Amperes (High Temp.)

### Compressor
- **Make**
- **Model Number**
- **Part Number**

### Evaporator
- **Fan** rpm
- **Face Area** sq ft
- **Tube Spacing** (VxH)
- **No. Rows** (Depth)
- **Tube OD/Fins per in.**

### Condenser
- **Fan** rpm
- **Face Area** sq ft
- **Tube Spacing** (VxH)
- **No. Rows** (Depth)
- **Tube OD/Fins per in.**

### ASHRAE Refrigerant Number
- * AHRI Published Rating

I certify that the models listed above meet all the requirements of AHRI Standard 1110*

SIGNED _______________________________ TITLE _______________________________
NOTES: Item 3: SP - Single-Package; RCU - Remote Condensing Unit
Item 4: D - Diesel - Engine Driven; G - Gas - Engine Driven; GA - Gasoline Engine Driven; E - Electric-Motor Driven
Item 6: Yes or No
Item 7: To be completed for Standard Rating Conditions (High Temp.)
Item 8: To be completed for Standard Rating Conditions (Low Temp.)
Item 9: Under Standard Rating Conditions, High Temp. and Low Temp., as applicable
Items 11, 12: Under Standard Rating Conditions
In interpreting these requirements, it is understood that cabinets, hoods, louvers, guards, and other regularly-furnished accessories and equipment shall be taken into account in the rating.
Items 11, 12: Identify vertical tube spacing (V) and horizontal tube spacing (H) in inches; e.g., 1x 0.866
Items 11, 12: Identity OD by number of eighths of an inch/fins per inch; e.g., 3/8 OD tube and 9 fpi, should be recorded as 3/9
REQUEST FOR APPROVAL OF TEST FACILITY TO TEST
TRANSPORT REFRIGERATION UNITS

AHRI CERTIFICATION PROGRAM
FOR
TRANSPORT REFRIGERATION EQUIPMENT

TEST FACILITY APPROVAL

We, the undersigned, hereby request the Air-Conditioning and Refrigeration Institute to approve our test facility, located at

for the purpose of conducting certification tests on Truck Transport Refrigeration. We certify that all testing shall be done according to the testing codes and certified Rating Programs approved by AHRI.

Accompanying this request is the following information:

a. A complete list of all instruments being used and a copy of each calibration report showing date last calibrated.

b. A schematic drawing of the test facility.

c. Photographs showing the test facility, which include sufficient views to show the location and connection of each instrument.

d. A completed personnel experience questionnaire form, TR-WT2, and witness testing laboratory inspection form, TR-WT3.

e. A statement that the test facility is in conformance with all of the provisions of the latest edition of AHRI Standard 1110, Mechanical Transport Refrigeration Units.

Company

By __________________________                      By _________________________________

Officer     Chief Engineer or Test Facility Director

__________________________                     Date _________________________________

Title
The above requirement for a test facility has been met by the requesting company in regard to instruments, equipment and test facility.

This test facility has satisfactorily met the requirements of the test facility inspection and is hereby approved for the purpose of conducting certification tests on Mechanical Transport Refrigeration equipment.

AIR-CONDITIONING, HEATING, AND REFRIGERATION INSTITUTE

By: __________________________________________________

_______________________________
Vice President, Certification Programs

Date: _________________________________
CONFIDENTIAL

WITNESS TESTING OF TRANSPORT REFRIGERATION EQUIPMENT

PERSONNEL - EXPERIENCE QUESTIONNAIRE

Participant’s Company Name: ____________________________________________________

Location: ___________________________________________________________________

Describe below in brief the length of service in the refrigeration and/or air-conditioning field, and experience of the personnel directly responsible for the conduct of the testing to be witnessed. State name, title and area of responsibility in the sections noted. It is assumed that the descriptions shall be those of your key test personnel and not necessarily of management personnel.

1. Name:________________________________ Title:____________________________

   Area of Responsibility: ______________________________________________________
   __________________________________________________________________________

   Experience: ________________________________________________________________
   __________________________________________________________________________
   __________________________________________________________________________

2. Name:________________________________ Title:____________________________

   Area of Responsibility: ______________________________________________________
   __________________________________________________________________________

   Experience: ________________________________________________________________
   __________________________________________________________________________
   __________________________________________________________________________

Date:  ___________________________________
Complied by:  _____________________________
**CONFIDENTIAL**

**TRANSPORT REFRIGERATION EQUIPMENT**

**WITNESS TESTING LABORATORY INSPECTION**

Participant’s Company Name: ____________________________________________________

Location: _____________________________________________________________________

_____________________________________________________________________________

1. What is the operating range of your facilities?

<table>
<thead>
<tr>
<th>No.</th>
<th>Capacity: Minimum</th>
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<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. How long does it take for you to install a unit for test (fully instrumented)?

<table>
<thead>
<tr>
<th>Persons</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct Supervision Man-Hours</td>
<td>_____</td>
</tr>
</tbody>
</table>

3. How long does it take for you to conduct the complete AHRI Certification Program Test on a unit?

<table>
<thead>
<tr>
<th>Persons</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct Supervision Man-Hours</td>
<td>_____</td>
</tr>
</tbody>
</table>

How many shifts per day shall you employ for the witness test? ________________

What type of instrumentation do you use to determine power input to the Calorimeter?

_____________________________________________________________________________

_____________________________________________________________________________
4. What type of instrument do you use to determine calorimeter and ambient air temperatures?

_____________________________________________________________________________
_____________________________________________________________________________
_____________________________________________________________________________
_____________________________________________________________________________

5. How often do you calibrate your instruments?

   Electrical: ________________   Temperature: _________________

6. Are your primary standards traceable to NIST? ________________________________

Complied by: ____________________________
Date: ____________________________
Dear Certification Program Applicant:

Please be advised that the following sample, when tested under the AHRI Certification Program for Transport Refrigeration Units, failed to perform in accordance with the latest edition of AHRI Standard 1110, *Mechanical Transport Refrigeration Units*. Test data is attached to this notification.

Manufacturer: ___________________  AHRI Test #: ___________________
Model: ___________________  Date of Test: ___________________

Per program rules, following notification of a qualification test failure the Applicant has seven (7) calendar days to elect one of the following options. If a completed Manufacturer’s Decision Form is not received by AHRI within seven (7) calendar days, the Applicant forfeits the opportunity for further testing and all models within the Basic Model Group (BMG) shall be re-rated proportionate to the failed test’s results.

FOLLOWING A FAILURE, PLEASE CHOOSE ONE (1) OF THE FOLLOWING OPTIONS. THE OPTION CHOSEN SHALL CORRESPOND TO THE OPTION AVAILABLE PER THE AHRI GENERAL OPERATIONS MANUAL AND THE TRANSPORT REFRIGERATION UNITS CERTIFICATION PROGRAM OPERATIONS MANUAL.

☐ **Defective Failure.** The Applicant claims that defective part(s) and/or assemblies caused the test failure. Within 30 calendar days of returning this Manufacturer’s Decision Form to AHRI, the Applicant shall provide AHRI with a detailed defect report stating the reason for the defective part(s) and/or assemblies. If AHRI agrees that the program’s definition of a defect has been met, AHRI shall notify the Applicant to supply new part(s) and/or assemblies, to replace only those that have been deemed defective, to the Independent Third-party Laboratory Contracted by AHRI (Laboratory). These new part(s) and/or assemblies shall be supplied to the Laboratory within 14 calendar days of AHRI’s request to the Applicant to supply replacement parts. Failure to provide a defect report and/or new part(s) and/or assemblies by their respective deadlines shall forfeit the Applicant’s opportunity for a replacement test, thus automatically re-rating the model to the failed test sample’s results.

The Applicant may send its own representative to install the replacement part(s) and/or assemblies or may request the Laboratory to perform the replacement. If the Applicant chooses to have the Laboratory install the replacements part(s) and/or assemblies, the Applicant may not claim improper installation of the part(s) and/or assemblies by the test lab.

Upon receipt of payment for the replacement test, the sample shall be re-tested with the replacement part(s) and/or assemblies installed. If the sample passes, the Applicant shall not be issued a first sample test failure. If the sample fails, the Applicant shall be issued a first sample failure and shall have the option to re-rate the sample or perform a second sample test.

The Applicant is responsible for the costs associated with the installation of the replacement parts or assemblies, as well as the cost to re-test the sample. The Laboratory shall directly invoice the Applicant for the costs associated with the replacement part installation. Prior to conducting the re-test, AHRI shall invoice the Applicant for the cost of the test. Payment shall be received within 30 calendar days from date of invoice. Failure to make payment within that timeframe shall forfeit the Applicant’s opportunity to claim defective, thus automatically re-rating all models within the BMG proportionate to the failed test’s results.

☐ **Re-rate.** All models within the BMG shall be re-rated proportionate to the failed test’s results. These re-rates shall be reflected in the AHRI Directory of Certified Product Performance.
Within 14 calendar days of this failure notification, the Applicant is required to advise AHRI of the steps being taken to correct advertising literature, specifications, software, etc.

Within 60 calendar days of this failure notification, the Applicant is required to have withdrawn all known advertising literature, specifications, software, etc. and to have submitted corrected publications/software to AHRI, distributors, dealers, and all other affected parties. The draft public notification of corrections, a copy of the distribution list of those to receive the notification and corrections, as well as a copy of the corrected publication(s)/software, shall be reviewed by AHRI prior to dissemination to the public.

Failure to comply with program rules regarding publication/software correction shall result in a program violation.

☐ 2nd Sample (Following 1st Sample Failure). The Applicant shall have a 2nd sample available for selection within 30 calendar days from the date of this failure notification. Failure to present samples for selection within this timeframe shall forfeit the Applicant’s opportunity for a 2nd sample test, thus automatically re-rating all models within the BMG proportionate to the failed test’s results.

AHRI shall invoice the Applicant for the 2nd sample test prior to conducting the test. Payment shall be received within 30 calendar days from date of invoice. Failure to make payment within that timeframe shall forfeit the Applicant’s opportunity to conduct a 2nd sample test, thus automatically re-rating all models within the BMG proportionate to the failed test’s results.

To ensure the opportunity to preserve this BMG, please return this completed Manufacturer’s Decision Form via email or fax within seven (7) calendar days to the certification engineer noted below. More details on the above options can be found in the AHRI General Operations Manual and the Transport Refrigeration Units Certification Program Operations Manual. The engineer can address any questions regarding the available options.

Hans Weiland, Certification Engineer
Phone: (703) 524-8800, x330
Email: hweiland@ahrinet.org
Fax: (703) 562-1942

Thank you for your participation in the AHRI Certification Program.

(Please complete all fields)

Company: __________________________ Date: __________________________

Submitted by: __________________________ Email: __________________________

Print

Fax: __________________________

Signature: __________________________ Phone: __________________________

Title: __________________________
<Date>

Dear Certification Program Applicant:

Please be advised that the following sample, when tested under the AHRI Certification Program for Transport Refrigeration Units, failed to perform in accordance with the latest edition of AHRI Standard 1110, Mechanical Transport Refrigeration Units. Test data is attached to this notification.

Manufacturer: ___________________________ AHRI Test #: ___________________________
Model: ___________________________ Date of Test: ___________________________

Per program rules, following notification of a qualification test failure the Applicant has seven (7) calendar days to elect one of the following options. If a completed Manufacturer’s Decision Form is not received by AHRI within seven (7) calendar days, the Applicant forfeits the opportunity for further testing and all models within the Basic Model Group (BMG) shall be re-rated proportionate to the failed test’s results.

FOLLOWING A FAILURE, PLEASE CHOOSE ONE (1) OF THE FOLLOWING OPTIONS. THE OPTION CHOSEN SHALL CORRESPOND TO THE OPTION AVAILABLE PER THE AHRI GENERAL OPERATIONS MANUAL AND THE TRANSPORT REFRIGERATION UNITS CERTIFICATION PROGRAM OPERATIONS MANUAL.

☐ **Defective Failure.** The Applicant claims that defective part(s) and/or assemblies caused the test failure. Within 30 calendar days of returning this Manufacturer’s Decision Form to AHRI, the Applicant shall provide AHRI with a detailed defect report stating the reason for the defective part(s) and/or assemblies. If AHRI agrees that the program’s definition of a defect has been met, AHRI shall notify the Applicant to supply new part(s) and/or assemblies, to replace only those that have been deemed defective, to the Independent Third-party Laboratory Contracted by AHRI (Laboratory). These new part(s) and/or assemblies shall be supplied to the Laboratory within 14 calendar days of AHRI’s request to the Applicant to supply replacement parts. Failure to provide a defect report and/or new part(s) and/or assemblies by their respective deadlines shall forfeit the Applicant’s opportunity for a replacement test, thus automatically re-rating the model to the failed test sample’s results.

The Applicant may send its own representative to install the replacement part(s) and/or assemblies or may request the Laboratory to perform the replacement. If the Applicant chooses to have the Laboratory install the replacements part(s) and/or assemblies, the Applicant may not claim improper installation of the part(s) and/or assemblies by the test lab.

Upon receipt of payment for the replacement test, the sample shall be re-tested with the replacement part(s) and/or assemblies installed. If the sample passes, the Applicant shall not be issued a second sample test failure. If the sample fails, the Applicant shall be issued a second sample failure and shall have the option to re-rate the sample.

The Applicant is responsible for the costs associated with the installation of the replacement parts or assemblies, as well as the cost to re-test the sample. The Laboratory shall directly invoice the Applicant for the costs associated with the replacement part installation. Prior to conducting the re-test, AHRI shall invoice the Applicant for the cost of the test. Payment shall be received within 30 calendar days from date of invoice. Failure to make payment within that timeframe shall forfeit the Applicant’s opportunity to claim defective, thus automatically re-rating all models within the BMG proportionate to the failed test’s results.

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Within 60 calendar days of this failure notification, the Applicant is required to have withdrawn all known advertising literature, specifications, software, etc. and to have submitted corrected publications/software to AHRI, distributors, dealers, and all other affected parties. The draft public notification of corrections, a copy of the distribution list of those to receive the notification and corrections, as well as a copy of the corrected publication(s)/software, shall be reviewed by AHRI prior to dissemination to the public.

Failure to comply with program rules regarding publication/software correction shall result in a program violation.

To ensure the opportunity to preserve this BMG, please return this completed Manufacturer’s Decision Form via email or fax within seven (7) calendar days to the certification engineer noted below. More details on the above options can be found in the AHRI General Operations Manual and the Transport Refrigeration Units Certification Program Operations Manual. The engineer can address any questions regarding the available options.

Hans Weiland, Certification Engineer
Phone: (703) 524-8800, x330
Email: hweiland@ahrinet.org
Fax: (703) 562-1942

Thank you for your participation in the AHRI Certification Program.

(Please complete all fields)

Company: ___________________________  Date: ___________________________
Submitted by: ______________________  Email: ___________________________
Printer: ____________________________  Fax: ____________________________
Signature: _________________________  Phone: ___________________________
Title: _____________________________
MANUFACTURER’S DECISION FORM –
FIRST SAMPLE TEST FAILURE NOTIFICATION
AHRI CERTIFICATION PROGRAM FOR
TRANSPORT REFRIGERATION UNITS

<Date>

Dear Certification Program Participant:

Please be advised that the following sample, when tested under the AHRI Certification Program for Transport Refrigeration Units, failed to perform in accordance with the latest edition of AHRI Standard 1110, Mechanical Transport Refrigeration Units. Test data is attached to this notification.

Manufacturer: ___________________________  AHRI Test #: ___________________________
Model: ___________________________  Date of Test: ___________________________
AHRI Reference #: ___________________________

Per program rules, following notification of a test failure the Participant has seven (7) calendar days to elect one of the following options. If a completed Manufacturer’s Decision Form is not received by AHRI within seven (7) calendar days, the Participant forfeits the opportunity for further testing and the Basic Model Group (BMG) shall be re-rated proportionate to the failed test’s results.

FOLLOWING A FAILURE, PLEASE CHOOSE ONE (1) OF THE FOLLOWING OPTIONS. THE OPTION CHosen MUST CORRESPOND TO THE OPTIONS AVAILABLE PER THE AHRI GENERAL OPERATIONS MANUAL AND THE TRANSPORTATION REFRIGERATION UNITS CERTIFICATION PROGRAM OPERATIONS MANUAL.

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The Participant may send its own representative to install the replacement part(s) and/or assemblies or may request the Laboratory to perform the replacement. If the Participant chooses to have the Laboratory install the replacements part(s) and/or assemblies, the Participant may not claim improper installation of the part(s) and/or assemblies by the test lab.

Upon receipt of payment for the replacement test, the sample shall be re-tested with the replacement part(s) and/or assemblies installed. If the sample passes, the Participant shall not be issued a first sample test failure. If the sample fails, the Participant shall be issued a first sample failure and shall have the option to rerate the sample or perform a second sample test.

The Participant is responsible for the costs associated with the installation of the replacement parts or assemblies, as well as the cost to re-test the sample. The Laboratory shall directly invoice the Participant for the costs associated with the replacement part installation. Prior to conducting the re-test, AHRI shall invoice the Participant for the cost of the test. Payment shall be received within 30 calendar days from date of invoice. Failure to make payment within that timeframe shall forfeit the Participant’s opportunity to claim defective, thus automatically re-rating all models within the BMG proportionate to the failed test’s results.
Re-rate. The BMG shall be re-rated proportionate to the failed test’s results. These re-rates shall be reflected in the AHRI Directory of Certified Product Performance.

2nd Sample (Following 1st Sample Failure). The Participant shall have a 2nd sample available for test within 60 calendar days from the date of this failure notification. If a sample is unavailable for test within this timeframe, the Participant shall forfeit the opportunity for a 2nd sample test, thus automatically re-rating the model to the failed test’s results.

AHRI shall invoice the Participant for the 2nd sample test prior to conducting the test. Payment shall be received within 30 calendar days from date of invoice. Failure to make payment within that timeframe shall forfeit the Participant’s opportunity to conduct a 2nd sample test, thus automatically re-rating the model to the failed test’s results.

Obsolete. Obsolete Models are those that the manufacturer stops producing following an AHRI test failure. Obsolete models, with their correct ratings, are shown in the AHRI Directory of Certified Product Performance for six (6) months.

Changes to Literature (for Re-Rate and Obsolete):
Within 14 calendar days of this failure notification, the Participant is required to advise AHRI of the steps being taken to correct its advertising literature, specifications, software, etc.

Within 60 calendar days of this failure notification, the Participant is required to have withdrawn all known advertising literature, specifications, software, etc. and to have submitted corrected publications/software to AHRI, distributors, dealers, and all other affected parties. The draft public notification of corrections, a copy of the distribution list of those to receive the notification and corrections, as well as a copy of the corrected publication(s)/software, shall be reviewed by AHRI prior to dissemination to the public.

Failure to comply with program rules regarding publication/software correction shall result in a program violation.

To ensure the opportunity to preserve this model, please return this completed manufacturer’s decision form via email or fax within seven (7) calendar days to the certification engineer noted below. More details on the above options can be found in the AHRI General Operations Manual and the Transport Refrigeration Units Certification Program Operations Manual. The engineer can address any questions regarding the available options.

Hans Weiland, Certification Engineer
Phone: (703) 524-8800, x330
Email: hweiland@ahrinet.org
Fax: (703) 562-1942

Thank you for your participation in the AHRI Certification Program.

(Please complete all fields)

Company: __________________________  Date: __________________________
Submitted by: ______________________  Email: _________________________
Print
Fax: _______________________________
Signature: _________________________  Phone: _________________________
Title: ______________________________

20
Dear Certification Program Participant:

Please be advised that the following sample, when tested under the AHRI Certification Program for Transport Refrigeration Units, failed to perform in accordance with the latest edition of AHRI Standard 1110, *Mechanical Transport Refrigeration Units*. Test data is attached to this notification.

**Manufacturer:**

**AHRI Test #:**

**Model:**

**Date of Test:**

**AHRI Reference #:**

Per program rules, following notification of a test failure the Participant has seven (7) calendar days to elect one of the following options. If a completed Manufacturer’s Decision Form is not received by AHRI within seven (7) calendar days, the Participant forfeits the opportunity for further testing and the Basic Model Group (BMG) shall be re-rated proportionate to the failed test’s results.

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Upon receipt of payment for the replacement test, the sample shall be re-tested with the replacement part(s) and/or assemblies installed. If the sample passes, the Participant shall not be issued a second sample test failure. If the sample fails, the Participant shall be issued a second sample failure and shall have the option to rerate the sample, or obsolete the model and its corresponding models within the BMG.

The Participant is responsible for the costs associated with the installation of the replacement parts or assemblies, as well as the cost to re-test the sample. The Laboratory shall directly invoice the Participant for the costs associated with the replacement part installation. Prior to conducting the re-test, AHRI shall invoice the Participant for the cost of the test. Payment shall be received within 30 calendar days from date of invoice. Failure to make payment within that timeframe shall forfeit the Participant’s opportunity to claim defective, thus automatically re-rating all models within the BMG proportionately to the failed test’s results.
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Hans Weiland, Certification Engineer
Phone: (703) 524-8800, x330
Email:hweiland@ahrinet.org
Fax: (703) 562-1942

Thank you for your participation in the AHRI Certification Program.

*(Please complete all fields)*

Company: ___________________________  Date: ___________________________

Submitted by: ______________________  Email: ___________________________

Fax: ______________________________  Phone: __________________________

Signature: _________________________  Print

Title: ________________________________