

**EL DORADO COUNTY BOARD OF SUPERVISORS
AGENDA ITEM TRANSMITTAL
Meeting of October 31, 2006**

AGENDA TITLE: Agreement #596-S0611 – The Trane Company

DEPARTMENT: General Services

DEPT SIGNOFF:

CAO USE ONLY: C

CONTACT: Bruce Pease *BP*

DATE: 10/17/2006

PHONE: 5857

DEPARTMENT SUMMARY AND REQUESTED BOARD ACTION:

The Department of General Services recommends that the Board of Supervisors:

1. Make findings that it is more economical and feasible to obtain an outside contractor to recondition and provide comprehensive annual maintenance on the Building A & B chiller in accordance with County Charter, Article II, Section 210(b)(6); and
2. Approve Agreement #596-S0611 with The Trane Company (Trane), a division of American Standard, Inc. and authorize Chairman to execute said Agreement.

CAO RECOMMENDATIONS: *Recommend approval. Laure S. Hill 10/24/06*

Financial impact? Yes () No

Funding Source: Gen Fund () Other

BUDGET SUMMARY:

Total Est. Cost	\$44,856.00
Funding	
Budgeted	\$44,856.00
New Funding	_____
Savings	_____
Other*	_____
Total Funding	\$44,856.00
Change in Net County Cost	\$0.00

Other:

CAO Office Use Only:

4/5's Vote Required () Yes () No
 Change in Policy () Yes () No
 New Personnel () Yes () No

CONCURRENCES:

Risk Management yes
 County Counsel yes
 Other _____

***Explain**

BOARD ACTIONS:

Vote: Unanimous _____ Or

Ayes:

Noes:

Abstentions:

Absent:

Rev. 04/05

I hereby certify that this is a true and correct copy of an action taken and entered into the minutes of the Board of Supervisors

Date: _____

Attest: Cindy Keck, Board of Supervisors Clerk

By: _____



The County of El Dorado

Department of General Services

Joanne M. Narloch, Director

*Location: 345 Fair Lane, Placerville, CA
Mailing: 360 Fair Lane, Placerville, CA 95667
Phone (530) 621-5847 Fax (530) 295-2538*

October 17, 2006

Board of Supervisors
330 Fair Lane
Placerville, CA 95667

Re: Agreement #596-S0611 – The Trane Company

Dear Board Members:

Recommendation:

1. Make findings that it is more economical and feasible to obtain an outside contractor to recondition and provide comprehensive annual maintenance on the Building A & B chiller in accordance with County Charter, Article II, Section 210(b)(6); and
2. Approve Agreement #596-S0611 with The Trane Company (Trane), a division of American Standard, Inc. and authorize Chairman to execute said Agreement.

Reason for Recommendation:

The chiller located at the El Dorado County Government Center, Buildings A and B, needs to be refurbished. The cost to replace the chiller has been estimated at \$250,000. Due to the significant replacement cost, a proposal was requested from Trane which offers a "Renewal Service Program" (RSP), a Program that rebuilds a compressor extending the life of the unit. The RSP, as proposed provides for a two-year warranty at a cost of \$44,856, with an additional three-year extended warranty cost of \$12,519, for a total contract price of \$57,375, bringing the total warranty period to five years. The additional three-year warranty will be budgeted in each of the subsequent fiscal years.

General Services recommends that the Board make the findings that it is more economical and feasible to contract out the RSP to refurbish the chiller.

The Officer or employee with responsibility for administering this Agreement is Bruce Pease, Building Operations Manager of the General Services Department, or successor. The Agreement has been approved by County Counsel and Risk Management.

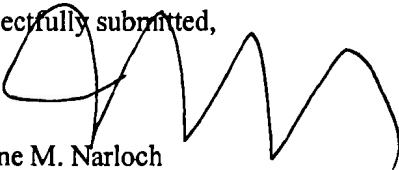
Fiscal Impact:

Appropriations for this Program were included in the Fiscal Year 2006/07 Building Maintenance Budget.

Action to be Taken Following Approval:

Board Clerk's office will forward executed Agreements to General Services for distribution, encumbrance and administration.

Respectfully submitted,


Joanne M. Narloch
Director

ORIGINAL

AGREEMENT FOR SERVICES #596-S0611

THIS AGREEMENT made and entered by and between the County of El Dorado, a political subdivision of the State of California (hereinafter referred to as "County") and The Trane Company, a division of American Standard, Inc., a Delaware Corporation, duly qualified to conduct business in the State of California, whose principal place of business is 4145 Del Mar Avenue, Rocklin, CA 95677; (hereinafter referred to as "Contractor");

WITNESSETH

WHEREAS, County has determined that it is necessary to obtain a Contractor to refurbish (hereinafter referred to as the "Renewal Service Program") and provide annual maintenance for one (1) Model RTHA180FCH Trane Chiller located at the El Dorado County Government Center, for the General Services Department, Building Maintenance Division; and

WHEREAS, Contractor has represented to County that it is specially trained, experienced, expert and competent to perform the special services required hereunder and County has determined to rely upon such representations; and

WHEREAS, it is the intent of the parties hereto that such services be in conformity with all applicable federal, state and local laws; and

WHEREAS, County has determined that the provision of these services provided by Contractor is in the public's best interest, and that these services are more economically and feasibly performed by outside independent Contractors as well as authorized by El Dorado County Charter, Section 210 (b) (6) and/or Government Code 31000;

NOW, THEREFORE, County and Contractor mutually agree as follows:

ARTICLE I

Scope of Services: Contractor agrees to furnish services necessary for the Renewal Service Program and annual maintenance for one (1) Model RTHA180FCH Trane Chiller located at the El Dorado County Government Center, for the General Services Department, Building Maintenance Division.

Renewal Service Program replaces worn materials, restores compressor performance, and updates applicable components to current design and is backed by a two (2) year factory warranty (parts and labor) for entire unit. (\$44,856.00)

Program includes, but not limited to:

- Unit and Starter Evaluation
- Oil and Refrigerant Lab Analysis
- Removal of Existing Refrigerant (Recovery Equipment Included)
- Factory Performed Compressor Renewal including:
 - Rebuilding compressor slide valve assembly and replacing load and unload solenoid valves;
 - Replacing compressor o-rings and gaskets with new current specification materials;
 - Replacing rotor bearings with new OEM bearings, installed to factory dimensions and tolerances;
 - Replacing motor terminals; and
 - Issuing a new compressor serial number reflecting renewal and new warranty
- Unit re-assembly and start-up consisting of:
 - Replacing the high pressure relief valves and high pressure switch;
 - Leak testing, evacuation, and dehydration;
 - Installing new oil and filter;
 - Recharging the unit using the original refrigerant; and
 - Starting up and logging per OEM startup recommendations
- Re-gasket Unit
- Eddy Current Test of Evaporator and Condenser Shell's
- Unit Upgrades and Modifications per OEM Service Bulletins
- Replacement of Existing Refrigerant
- All Necessary Labor and Rigging
- Startup and System Check Out
- Shipping and Handling

Extended Three-Year Warranty with Service Agreement

(\$12,519.00 or \$4,173.00/per year)

Services shall be in accordance with Exhibit "A", marked "Scope of Service – Select Service Agreement", incorporated herein and made by reference a part hereof.

ARTICLE II

License: Contractor warrants and represents that he/she holds and will maintain throughout the course of contract all necessary licenses and certifications required by the categories and type of the Work being performed.

ARTICLE III

Term: This Agreement shall become effective when fully executed by both parties hereto and shall expire at the end of the 3 year Extended Warranty and Service Agreement period.

ARTICLE IV

Compensation for Services: For services provided herein, County agrees to pay Contractor the sum of \$44,856.00 upon completion of the Renewal Service Program, at which time the chiller will be back in place and fully operational. Payment shall be made within thirty (30) days following County's receipt and approval of itemized invoice detailing services rendered. County agrees to pay Contractor the sum of \$4,173.00 for three (3) consecutive years commencing after the extended two-year factory warranty period. Payments shall be made in advance on a yearly basis.

The Contractor shall pay and require payment of wages according to a scale of prevailing wage rates determined by California law, which scale is on file at the El Dorado County Department of General Services, Facilities Division, and shall comply with all wage requirements, as set forth in Labor Code Section 1770 etc. seq., 1773.2, 1775, 1776, 1810 and 1813.

As required under the provisions of Labor Code Section 1776, Contractor and sub-contractors shall keep accurate payroll records. A certified copy of all payroll records shall be available for inspection at all reasonable hours at the principal office of the Contractor.

The total amount of this Agreement shall not exceed \$57,375.00.

ARTICLE V

Changes to Agreement: This Agreement may be amended by mutual consent of the parties hereto. Said amendments shall become effective only when in writing and fully executed by duly authorized officers of the parties hereto.

ARTICLE VI

Contractor to County: It is understood that the services provided under this Agreement shall be prepared in and with cooperation from County and its staff. It is further agreed that in all matters pertaining to this Agreement, Contractor shall act as Contractor only to County and shall not act as Contractor to any other individual or entity affected by this Agreement nor provide information in any manner to any party outside of this Agreement that would conflict with Contractor's responsibilities to County during term hereof.

ARTICLE VII

Assignment and Delegation: Contractor is engaged by County for its unique qualifications and skills as well as those of its personnel. Contractor shall not subcontract, delegate or assign services to be provided, in whole or in part, to any other person or entity without prior written consent of County.

ARTICLE VIII

Independent Contractor/Liability: Contractor is, and shall be at all times, deemed independent and shall be wholly responsible for the manner in which it performs services required by terms of this Agreement. Contractor exclusively assumes responsibility for acts of its employees, associates, and subcontractors, if any are authorized herein, as they relate to services to be provided under this Agreement during the course and scope of their employment.

Contractor shall be responsible for performing the work under this Agreement in a safe, professional, skillful and workmanlike manner and shall be liable for its own negligence and negligent acts of its employees. County shall have no right of control over the manner in which work is to be done and shall, therefore, not be charged with responsibility of preventing risk to Contractor or its employees.

ARTICLE IX

Fiscal Considerations: The parties to this Agreement recognize and acknowledge that County is a political subdivision of the State of California. As such, El Dorado County is subject to the provisions of Article XVI, Section 18 of the California Constitution and other similar fiscal and procurement laws and regulations and may not expend funds for products, equipment or services not budgeted in a given fiscal year. It is further understood that in the normal course of County business, County will adopt a proposed budget prior to a given fiscal year, but that the final adoption of a budget does not occur until after the beginning of the fiscal year.

Notwithstanding any other provision of this Agreement to the contrary, County shall give notice of cancellation of this Agreement in the event of adoption of a proposed budget that does not provide for funds for the services, products or equipment subject herein. Such notice shall become effective upon the adoption of a final budget which does not provide funding for this Agreement. Upon the effective date of such notice, this Agreement shall be automatically terminated and County released from any further liability hereunder.

In addition to the above, should the Board of Supervisors during the course of a given year for financial reasons reduce, or order a reduction, in the budget for any County department for which services were contracted to be performed, pursuant to this paragraph in the sole discretion of the County, this Agreement may be deemed to be canceled in its entirety subject to payment for services performed prior to cancellation.

ARTICLE X

Default, Termination, and Cancellation:

- A. **Default:** Upon the occurrence of any default of the provisions of this Agreement, a party shall give written notice of said default to the party in default (notice). If the party in default does not cure the default within ten (10) days of the date of notice (time to cure), then such party shall be in default. The time to cure may be extended at the discretion of the party giving notice. Any extension of time to cure must be in writing, prepared by the party in default for signature by the party giving notice and must specify the reason(s) for the extension and the date on which the extension of time to cure expires.

Notice given under this section shall specify the alleged default and the applicable Agreement provision and shall demand that the party in default perform the provisions of this Agreement within the applicable period of time. No such notice shall be deemed a termination of this Agreement unless the party giving notice so elects in this notice, or the party giving notice so elects in a subsequent written notice after the time to cure has expired.

- B. **Bankruptcy:** This Agreement, at the option of the County, shall be terminable in the case of bankruptcy, voluntary or involuntary, or insolvency of Contractor.
- C. **Ceasing Performance:** County may terminate this Agreement in the event Contractor ceases to operate as a business, or otherwise becomes unable to substantially perform any term or condition of this Agreement.
- D. **Termination or Cancellation without Cause:** County may terminate this Agreement in whole or in part seven (7) calendar days upon written notice by County for any reason. If such prior termination is effected, County will pay for satisfactory services rendered prior to the effective dates as set forth in the Notice of Termination provided to Contractor, and for such other services, which County may agree to in writing as necessary for contract resolution. In no event, however, shall County be obligated to pay more than the total amount of the contract. Upon receipt of a Notice of Termination, Contractor shall promptly discontinue all services affected, as of the effective date of termination set forth in such Notice of Termination, unless the notice directs otherwise. In the event of termination for default, County reserves the right to take over and complete the work by contract or by any other means.

ARTICLE XI

Notice to Parties: All notices to be given by the parties hereto shall be in writing and served by depositing same in the United States Post Office, postage prepaid and return receipt requested.

Notices to County shall be in duplicate and addressed as follows:

COUNTY OF EL DORADO
GENERAL SERVICES DEPARTMENT
360 FAIR LANE
PLACERVILLE, CA 95667
ATTN: KEITH C. LEECH, DIRECTOR

or to such other location as the County directs.

Notices to Contractor shall be addressed as follows:

THE TRANE COMPANY
DIVISION OF AMERICAN STANDARD, INC.
4145 DEL MAR AVENUE
ROCKLIN, CA 95677

or to such other location as the Contractor directs.

ARTICLE XII

Indemnity: The Contractor shall defend, indemnify, and hold the County harmless against and from any and all claims, suits, losses, damages and liability for damages of every name, kind and description, including attorneys fees and costs incurred, brought for, or on account of, injuries to or death of any person, including but not limited to workers, County employees, and the public, or damage to property, or any economic or consequential losses, which are claimed to or in any way arise out of or are connected with the Contractor's services, operations, or performance hereunder, regardless of the existence or degree of fault or negligence on the part of the County, the Contractor, subcontractor(s) and employee(s) of any of these, except for the sole, or active negligence of the County, its officers and employees, or as expressly prescribed by statute. This duty of Contractor to indemnify and save County harmless includes the duties to defend set forth in California Civil Code Section 2778.

ARTICLE XIII

Insurance: Contractor shall provide proof of a policy of insurance satisfactory to the El Dorado County Risk Manager and documentation evidencing that Contractor maintains insurance that meets the following requirements:

- A. Full Workers' Compensation and Employers' Liability Insurance covering all employees of Contractor as required by law in the State of California.
- B. Commercial General Liability Insurance of not less than \$1,000,000.00 combined single limit per occurrence for bodily injury and property damage.
- C. Automobile Liability Insurance of not less than \$1,000,000.00 is required in the event motor vehicles are used by the Contractor in the performance of the Agreement.

- D. In the event Contractor is a licensed professional, and is performing professional services under this Agreement, professional liability (for example, malpractice insurance) is required with a limit of liability of not less than \$1,000,000.00 per occurrence. For the purposes of this Agreement, professional liability is not required.
- E. Contractor shall furnish a certificate of insurance satisfactory to the El Dorado County Risk Manager as evidence that the insurance required above is being maintained.
- F. The insurance will be issued by an insurance company acceptable to the Risk Management Division, or be provided through partial or total self-insurance likewise acceptable to the Risk Management Division.
- G. Contractor agrees that the insurance required above shall be in effect at all times during the term of this Agreement. In the event said insurance coverage expires at any time or times during the term of this Agreement, Contractor agrees to provide at least thirty (30) days prior to said expiration date, a new certificate of insurance evidencing insurance coverage as provided for herein for not less than the remainder of term of the Agreement, or for a period of not less than one (1) year. New certificates of insurance are subject to the approval of the Risk Management Division and Contractor agrees that no work or services shall be performed prior to the giving of such approval. In the event the Contractor fails to keep in effect at all times insurance coverage as herein provided, County may, in addition to any other remedies it may have, terminate this Agreement upon the occurrence of such event.
- H. The certificate of insurance must include the following provisions stating that:
 - 1. The insurer will not cancel the insured's coverage without thirty (30) days prior written notice to County, and;
 - 2. The County of El Dorado, its officers, officials, employees, and volunteers are included as additional insured, but only insofar as the operations under this Agreement are concerned. This provision shall apply to the general liability policy.
- I. The Contractor's insurance coverage shall be primary insurance as respects the County, its officers, officials, employees and volunteers. Any insurance or self-insurance maintained by the County, its officers, officials, employees or volunteers shall be excess of the Contractor's insurance and shall not contribute with it.
- J. Any deductibles or self-insured retentions must be declared to and approved by the County, either: the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects the County, its officers, officials, employees, and volunteers; or the Contractor shall procure a bond guaranteeing payment of losses and related investigations, claim administration and defense expenses.
- K. Any failure to comply with the reporting provisions of the policies shall not affect coverage provided to the County, its officers, officials, employees or volunteers.

- L. The insurance companies shall have no recourse against the County of El Dorado, its officers and employees or any of them for payment of any premiums or assessments under any policy issued by any insurance company.
- M. Contractor's obligations shall not be limited by the foregoing insurance requirements and shall survive expiration of this Agreement.
- N. In the event Contractor cannot provide an occurrence policy, Contractor shall provide insurance covering claims made as a result of performance of this Agreement for not less than three (3) years following completion of performance of this Agreement.
- O. Certificate of insurance shall meet such additional standards as may be determined by the contracting County Department either independently or in consultation with the Risk Management Division, as essential for protection of the County.

ARTICLE XIV

Interest of Public Official: No official or employee of County who exercises any functions or responsibilities in review or approval of services to be provided by Contractor under this Agreement shall participate in or attempt to influence any decision relating to this Agreement which affects personal interest or interest of any corporation, partnership, or association in which he/she is directly or indirectly interested; nor shall any such official or employee of County have any interest, direct or indirect, in this Agreement or the proceeds thereof.

ARTICLE XV

Interest of Contractor: Contractor covenants that Contractor presently has no personal interest or financial interest, and shall not acquire same in any manner or degree in either: 1) any other contract connected with or directly affected by the services to be performed by this Agreement; or, 2) any other entities connected with or directly affected by the services to be performed by this Agreement. Contractor further covenants that in the performance of this Agreement no person having any such interest shall be employed by Contractor.

ARTICLE XVI

California Residency (Form 590): All independent Contractors providing services to the County must file a State of California Form 590, certifying their California residency or, in the case of a corporation, certifying that they have a permanent place of business in California. The Contractor will be required to submit a Form 590 prior to execution of an Agreement or County shall withhold seven (7) percent of each payment made to the Contractor during term of the Agreement. This requirement applies to any agreement/contract exceeding \$1,500.00.

ARTICLE XVII

Taxpayer Identification Number (Form W-9): All independent Contractors or corporations providing services to the County must file a Department of the Treasury Internal Revenue Service Form W-9, certifying their Taxpayer Identification Number.

ARTICLE XVIII

California Forum and Law: Any dispute resolution action arising out of this Agreement, including, but not limited to, litigation, mediation, or arbitration, shall be brought in El Dorado County, California, and shall be resolved in accordance with the laws of the State of California. Contractor waives any removal rights it might have under Code of Civil Procedure Section 394.

ARTICLE XIX

Administrator: The County Officer or employee with responsibility for administering this Agreement is Bruce Pease, Building Operations Manager, General Services Department, or successor.

ARTICLE XX

Authorized Signatures: The parties to this Agreement represent that the undersigned individuals executing this Agreement on their respective behalf are fully authorized to do so by law or other appropriate instrument and to bind upon said parties to the obligations set forth herein.

ARTICLE XXI

Partial Invalidity: If any provision of this Agreement is held by a court of competent jurisdiction to be invalid, void or unenforceable, the remaining provisions will continue in full force and effect without being impaired or invalidated in any way.

ARTICLE XXII

Venue: Any dispute resolution action arising out of this Agreement, including, but not limited to, litigation, mediation, or arbitration, shall be brought in El Dorado County, California, and shall be resolved in accordance with the laws of the State of California. Contractor waives any removal rights it might have under Code of Civil Procedure Section 394.

ARTICLE XXIII

Entire Agreement: This document and the documents referred to herein or exhibits hereto are the entire Agreement between the parties and they incorporate or supersede all prior written or oral Agreements or understandings.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement the day and year first below written.

CONTRACT ADMINISTRATOR CONCURRENCE:

By:  Dated: 2-15-06
Bruce Pease, Building Operations Manager
General Services Department

REQUESTING DEPARTMENT HEAD CONCURRENCE:

By:  Dated: 2-15-06
Keith C. Leech, Director
General Services Department

-- COUNTY OF EL DORADO --

Dated: _____

By: _____

**Chairman
Board of Supervisors
"County"**

**ATTEST:
Cindy Keck, Clerk
of the Board of Supervisors**

By: _____ Date: _____
Deputy Clerk

-- CONTRACTOR --

Dated: 2/22/06

**AMERICAN STANDARD, INC.
A DELAWARE CORPORATION**

By:  _____

**Dale White, District Manager
The Trane Company, a division of American Standard, Inc.
"Contractor"**



EXHIBIT "A"

Scope of Service Select Service Agreement

Scheduled maintenance inspections are performed at various times throughout the year. The Equipment List indicates the planned inspection month. Tasking Sheets provide an overview of the maintenance to be performed.

Inspections

This coverage includes one Comprehensive annual inspection and 2 periodic maintenance inspections per year.

Maintenance Parts and Materials

Parts and materials shall be provided to complete scheduled maintenance tasks.

Repair Labor

Coverage includes all labor to diagnose, repair or replace failed components of the equipment covered under the provisions of this agreement.

Repair Parts and Material

Parts, refrigerant, oil, and other material to complete repairs are furnished under this agreement.

Emergency Service

Emergency service and repairs are available on a 24-hour-per-day basis and will be invoiced at the prevailing straight time or overtime contract rate.

Written Reports

Written reports will be provided to the customer representative following each Scheduled Maintenance inspection, repair, or emergency call.

Preferential Service Agreement Rate

This contract includes preferred service status. For work outside the scope of service, a discount of 20 % from Trane's Market Rate at the time service is performed applies.

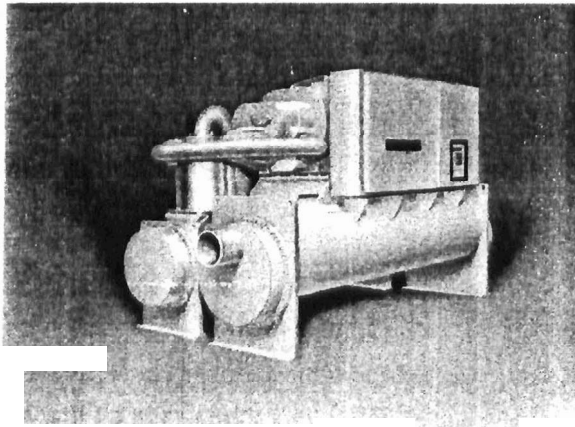
EQUIPMENT COVERAGE

Trane
agrees to provide service for

El Dorado County General Serv
360 Fair Lane
Kelsey, CA 95667 USA
ATTENTION: Bruce Pease

The following equipment will be serviced:

Equipment	Manufacturer	Area Served	Model Number	Serial Number	Type of Agreement	Inspection Type
Screw Chiller	Trane	Bldg	RTHA180	U90B01745	Select	3 times/yr



Except as otherwise expressly provided, this Service Agreement applies only to the equipment listed above.

SCHEDULES OF MAINTENANCE

TRANE HELI-ROTOR CHILLERS, W-C (Series "R")

(1) COMPREHENSIVE ANNUAL INSPECTION SERVICE ROT-110

1. Report in with the Customer Representative.
2. Record and report abnormal conditions, measurements taken, etc.
3. Review customer logs with customer for operational problems and trends.

1. General Assembly

- a) Leak-test the chiller and report the leak check results.
- b) Repair minor leaks as required (e.g. valve packing, flare nuts).
- c) Calculate refrigerant loss rate and report to customer.
- d) Visually inspect condenser tubes for cleanliness.

2. Controls and Safeties

- a) Inspect the control panel for cleanliness.
- b) Inspect wiring and connections for tightness and signs of overheating and discoloration.
- c) Verify all settings in the electronic control panel.
- d) Test the low oil pressure safety device. Calibrate and record setting. .
- e) Test the high motor temperature safety device. Calibrate and record setting.
- f) Test the operation of the chilled water pump and condenser water pump starter auxiliary contacts.
- g) Verify the setting of the current control device.

3. Lubrication System

- a) Pull oil sample for spectroscopic analysis.
- b) Test the oil for acid content and discoloration. Make recommendations to the customer based on the results of the test.
- c) Change the oil filter.
- d) Verify the operation of the oil heater. Measure amps and volts and compare the readings with the watt rating of the heater.

4. Motor and Starter

- a) Clean the starter and cabinet.
- b) Inspect wiring and connections for tightness and signs of overheating and discoloration.
- c) Check tightness of motor terminal connections.
- d) Check condition of the contacts for wear and pitting.
- e) Check contactors for free and smooth operation.
- f) Check the mechanical linkages for wear, security and clearances.
- g) Meg the motor and record the readings.
- h) Verify the operation of the electrical interlocks.
- i) Measure voltage and record. Voltage should be nominal voltage $\pm 10\%$.

**(1) STARTUP / CHECK OUT PROCEDURE
ROT-120**

1. Verify the operation of the oil heater.
2. Check oil level.
3. Verify full water systems, including the cooling tower, the condenser, and the evaporator.
4. Verify clean cooling tower and strainers.
5. Start the condenser water pump, the chilled water pump, and the cooling tower fan(s).
6. Test all flow-proving devices on the chilled water and the condenser water circuits.
7. Verify the flow rates through the condenser and the evaporator.
8. Start the chiller.
9. Verify the starter operation, amperage, and voltage.
10. Verify the operation of all timing devices.
11. Check the setpoint and sensitivity of the temperature control. Verify the operation.
12. Verify the operation of the current control device.
13. Check the setpoint and sensitivity of the chilled water temperature control device. Verify the operation.
14. Verify the operation of the condenser water temperature control device.
15. Test the high condenser pressure safety device.
16. Test the low refrigerant temperature safety device.
17. Verify the operation of the “load” and the “unload” solenoid valves.
18. Verify the operation of the capacity control slide valve.
19. Verify the operation of the electronic expansion valve (RTHB only).
20. Check the refrigerant charge, using Trane guidelines.
21. Log the chiller operating temperatures, pressures, voltages, and amperages.
22. Review operating procedures with operating personnel.
23. Provide a written report of completed work, operating log, and indicate any uncorrected deficiencies detected.

**(1) MID-SEASON RUNNING INSPECTION
ROT-130**

1. Check the general operation of the unit.
2. Log the operating temperatures, pressures, voltages, and amperages.
3. Check the operation of the control circuit.
4. Check the operation of the motor and starter.
5. Analyze the recorded data. Compare the data to the original design conditions.
6. Review operating procedures with operating personnel.
7. Provide a written report of completed work, operating log, and indicate any uncorrected deficiencies detected.

CONDENSER CLEANING

(Once Annually) WATER-COOLED CONDENSERS BRUSH TUBES CDS-210

1. Pull easy end head.
2. Brush tubes as necessary.

NOTE: The term “easy end head” refers to the head which has no piping attached to it. In the case of 1-pass or 3-pass vessels, there will be no easy end head, and extra time must be allotted to the job for the removal of the piping. An exception to this would be the unit’s having marine boxes.

SPECIAL ANALYSIS PROCEDURES

(Once Annually) OIL SAMPLE/SPECTROGRAPHIC ANALYSIS ANL-110

1. Pull oil sample for spectrographic analysis.