



## QUOTED SERVICE REPORT

\*Scan the QR Code to see new offerings

**Service Request Number:** 1-83254615109

**Status:** Completed

**Requestor:** Raul Cozza

JOHNSON CONTROLS SALISBURY WILMINGTON CB - 0N28

812 First State Blvd

Wilmington, DE 19804-3573

(866) 589-9275

**Service Site:**

DUPONT EXPERIMENTAL STATION

DUPONT EXPERIMENTAL

Rt 141 Lancaster Pike

Wilmington, DE 19880-0000

**Bill To:**

E I DUPONT DENEMOURS CO

1325779

Attn Accounts Payable Department

Po Box 80040

Wilmington, DE 19880-0040

**Purchase Order:** Approver: R. Cozza

**Blanket Purchase Order:**

**Customer Authorization:**

**Customer Work Order:**

**Quoted Amount:** \$4,971.71

**Service Requested:**

CHILLER #10 ANNUAL MAINTENANCE (2018 YEAR-END)

Refrigerant Leak Test chiller and Document Leaks Found (repair minor leaks, if possible)

Furnish and Change Compressor Oil Filter, and Oil Return Filter-Drier

Disassemble Compressor Coupling, Clean, & Check Cold Alignment

Measure & Record Compressor Low-Speed Axial Thrust

Reassemble Coupling and Re-Check Compressor Cold Alignment

Vacuum out Compressor Motor and Change Air Filters

Check all Chiller Controls, Safeties, and Low Voltage Electrical Connections

Document all tasks and Provide DuPont with a Comprehensive Report

\*Refrigerant & Oil Samples will be performed under a separate Quote\*

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Lynn Dolphin

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Service Provided:				
Date	Activity Number	Activity Status	Work Performed	By
01/14/2019	1-12GNH9NZ	Completed	<p>COMPRESSOR ALIGNMENT CHECK: 65PSIG / OIL SUMP @ 136F</p> <ul style="list-style-type: none"> <li>• DISASSEMBLED 1-7/8" YORK-FLEX COUPLING &amp; CLEANED</li> <li>• AXIAL SHIMS= 0.130" + 0.115" = 0.245"</li> <li>• MEASURED MOTOR SHAFT FLOAT= 0.528" (ACCEPTABLE)</li> </ul> <p>MOTOR TO COMP SHAFT CLEARANCE: Motor Full Forward= 3.463" Motor Full Back= 3.991" Float Total= 0.528" (0.500-0.565) (Min-Max)</p> <ul style="list-style-type: none"> <li>• MEASURED MOTOR COUPLING RIM RUNOUT= 0.002" / FACE RUNOUT= 0.001"</li> <li>• MEASURED COMP SHAFT RADIAL RUNOUT: 0.003" / FACE RUNOUT= 0.000"</li> <li>• MEASURED COMP AXIAL THRUST= 0.015" (@ 0 PSIG) / 0.017" (@ 70 PSIG)</li> </ul> <ul style="list-style-type: none"> <li>• CHECKED TORQUE OF MOTOR FEET BOLTS</li> <li>• RECORDED ALIGNMENT w/LASER &amp; DIALS</li> </ul> <p>* ALIGNMENT HAS BEEN SLIGHTLY OUT OF TOLERANCE &amp; NOTED SINCE THE LAST ANNUAL MAINTENANCE (Details were forwarded to DuPont. Their Alignment Crew is Scheduled to perform the work) *</p> <ul style="list-style-type: none"> <li>• CLEANED CHILLER</li> <li>• REFRIGERANT LEAK TESTED ENTIRE CHILLER. * NO LEAKS WERE DISCOVERED AT THIS TIME *</li> </ul>	Kevin Frazee

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Date	Activity Number	Activity Status	Work Performed	By
01/31/2019	1-12F5MQAY	Completed	<p>* DUE TO MOTOR ALIGNMENT WORK BY DUPONT ON 01/23/2019, THE FOLLOWING STEPS COULD NOT BE COMPLETED UNTIL AFTERWARDS (EXTRA TIME INVOLVED BILLED TO SR#: 1-84110505416)* :</p> <ul style="list-style-type: none"> <li>• REASSEMBLED DRIVE COUPLING, TORQUED HUBS TO SPEC (23 FT/LB)</li> <li>• REASSEMBLED COUPLING GUARD</li> <li>• CHILLER WAS THEN UNLOCKED &amp; PREPPED FOR STARTUP (BY JCI)</li> </ul> <p>** CHILLER #10 WATER VALVES &amp; MAIN MOTOR ARE STILL LOCKED OUT BY DUPONT OPERATIONS. STARTUP &amp; INSPECTION WILL NEED TO BE PERFORMED AT A LATER DATE **</p> <ul style="list-style-type: none"> <li>• DOCUMENTED ALL ANNUAL MAINTENANCE TASKS PERFORMED &amp; PROVIDED DUPONT WITH COMPREHENSIVE REPORT (INCLUDING OIL AND REFRIGERANT ANALYSIS REPORTS)</li> </ul>	Kevin Frazee

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Service Provided:				
Date	Activity Number	Activity Status	Work Performed	By
12/26/2018	1-128VNC92	Completed	<p>CHILLER #10 ANNUAL MAINTENANCE (2018 YEAR-END)</p> <p>RUN HOURS: 42,866 TOTAL STARTS: 1436</p> <ul style="list-style-type: none"> <li>• REMOVED REFRIGERANT &amp; OIL SAMPLES, SHIPPED TO LAB FOR ANALYSIS. CONDITION of BOTH is NORMAL. ANALYTICAL REPORTS WILL BE SENT TO DUPONT (Expense covered under QUOTE# 1-1280MMMWW)</li> <li>• REPLACED MAIN OIL FILTER w/ 3 Micron (026-32386-000)</li> <li>• REPLACED OIL RETURN FILTER-DRIER (C-413) (026-13508-000)</li> <li>• CHECKED OIL HEATER OPERATION. INCREASED OFFLINE SUMP SETTING TO 135F</li> <li>• OIL SUMP LEVEL w/ PUMP RUNNING: 3/4" TSG</li> </ul>	Kevin Frazee
12/28/2018	1-12F5IY07	Completed	<ul style="list-style-type: none"> <li>• CHECKED ALL CHILLER CONTROLS, SAFETIES, &amp; LOW VOLTAGE ELECTRICAL CONNECTIONS</li> <li>• CHECKED BOTH HIGH PRESSURE SWITCH CUTOFF PRESSURES OF 180PSIG &amp; ALARM POINT ACTIVATION ON THE POWERHOUSE MAIN CONTROL SYSTEM</li> <li>** SWITCH ON THE LEFT WOULD NOT KEEP ADJUSTED SETTING (NON REPEATABLE PRESSURE LEVEL). RECOMMEND REPLACEMENT **</li> <li>• VERIFIED RUPTURE DISK PRESSURE SWITCH CLOSURE AT 50PSIG &amp; ALARM POINT ACTIVATION ON THE POWERHOUSE MAIN CONTROL SYSTEM</li> <li>• CLEANED MOTOR. VACUUMED OUT INTERNALS. CHANGED BEARING OIL &amp; AIR FILTERS (16x25x2 QTY-4)</li> <li>** DISCOVERED MULTIPLE FILTERS STUCK IN BOTH DRIVE &amp; OPPOSITE END AIR PLENUMS HEADING TOWARDS THE MOTOR'S STATOR / ROTOR. THESE FILTERS WERE RETRIEVED &amp; REMOVED UNDER SR#: 1-84110505416 **</li> </ul>	Kevin Frazee

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Materials Used:
Description
DEHY 3/8 MALE FLA**C-413 / 026 13508 000
KIT, REPL GASKETS & / 028 08312 001
KIT, FILTER / 392 10719 000
L97-525 80055.021625 16X25X2 FILTER PLEATED EXTENDED SURFACE FLANDERS MERV 8 10

Refrigerant Tracking:											
Activity #	Action Taken	Type	Amount	Asset ID	Customer Tag	Serial Number	Model Number	Circuit ID	Circuit Tag	Leak Location	Leak Rate
No Refrigerant Activity Recorded To Date											

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### Service Order Warranty Terms and Conditions

#### **PARTS WARRANTY:**

Johnson Controls, Inc. (JCI) warrants that original equipment, parts or components manufactured or labeled by JCI shall be free from defects in material and workmanship under normal usage and proper installation and maintenance for a period of one (1) year from the date of shipment. Equipment, parts or components not manufactured or labeled by JCI shall carry a warranty from defects in material and workmanship under normal usage and proper installation and maintenance for a period of ninety (90) days from the date of shipment. Notwithstanding the foregoing, in the event JCI is reasonably able to identify a warranty for a period longer than the ninety (90) days applicable to equipment, parts or components not manufactured or labeled by JCI, it will assign all assignable rights under such warranty to Customer and reasonably cooperate in the enforcement of any warranty claim. Recertified or replacement parts installed on equipment and still under the original equipment manufacturer's warranty are covered for ninety (90) days or the remainder of the original equipment manufacturer warranty period, whichever is longer. For large tonnage chillers, JCI will warrant under normal usage and proper installation and maintenance for a period of one (1) year from the date of shipment: screw compressors, motors, control panels and components, VFD's and components and Liquid Cooled Solid State Starters and components. For small tonnage chillers, JCI will warrant under normal usage and proper installation and maintenance for a period of one (1) year from the date of shipment: scroll compressors, condenser coils, control panels and components, screw compressors (DXS and Mustang), and fan motors. In the event of a valid warranty claim, the Customer's remedy shall, at JCI's sole discretion and subject to the exclusions herein, be limited to repair or replacement of the subject equipment, part or component conditioned upon the return to JCI of any defective equipment, part or component. This Parts Warranty does not cover any shipping, handling or transportation charges or any associated labor costs.

#### **LABOR WARRANTY:**

Johnson Controls, Inc. (JCI) warrants its workmanship or that of its agents in relation to installation of materials for a period of ninety (90) days from date of installation or with respect to service work for a period of ninety (90) days from the date of service. Customer acknowledges that re-performance shall be its exclusive and only remedy with regards to any services provided by JCI. Customer shall bear all labor costs associated with the repair or replacement of failed material that is outside the scope of this express labor warranty. All warranty labor shall be executed during JCI normal business hours.

These warranties do not extend to any equipment which has been repaired by others, abused, altered, or misused in any way, or which has not been properly and reasonably maintained.

THESE WARRANTIES ARE IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THOSE OF MERCHANTABILITY AND FITNESS FOR A SPECIFIC PURPOSE. UNDER NO CIRCUMSTANCES SHALL JCI BE LIABLE FOR ANY SPECIAL, INDIRECT, OR CONSEQUENTIAL DAMAGES ARISING FROM OR RELATING TO ANY DEFECT IN MATERIAL OR WORKMANSHIP OF EQUIPMENT OR THE PERFORMANCE OF SERVICES.

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