



Report Date: 06/28/2017

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\*Scan the QR Code to see new offerings

## SERVICE REPAIR REPORT

**Service Request Number:** 1-49844903353

**Status:** Scheduled

**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:**

**Blanket Purchase Order:**

**Customer Authorization:**

**Customer Work Order:**

**Service Requested:**

#7 CONOFLOW Actuator Service and Material order

**Service Provided:**

| Date       | Activity Number | Activity Status | Work Performed  | By           |
|------------|-----------------|-----------------|-----------------|--------------|
| 05/09/2017 | 1-MSLG02F       | Completed       | Material order. | Kevin Frazee |

For Questions Regarding Service, Please Contact:

Version: Release # PHL 3

Lynn Dolphin

(866) 589-9275



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| Service Provided: |                 |                 |   |              |
|-------------------|-----------------|-----------------|---|--------------|
| Date              | Activity Number | Activity Status | Work Performed  | By           |
| 05/19/2017        | 1-MWF1K7R       | Completed       | <p>05/17/2017</p> <ul style="list-style-type: none"> <li>- Investigated Positioning Issues with the CONOFLOW Vane Actuator</li> <li>- Reconfigured Piping to Facilitate Troubleshooting</li> <li>- Based on Observations, the Internal Piston Lipseals were definitely leaking passed</li> <li>- Despite Issues with the Actuator, Customer Requested Chiller be Started</li> <li>- Unlocked and Started Chiller</li> <li>- Actuator Positioning was Extremely Unstable in AUTOMATIC Control</li> <li>- Switched PRV Control to MANUAL with Output Signal @ 25%</li> <li>- Adjusted Actuator to the Position Corresponding to a 25% Stroke and Fixed</li> <li>- Switched Hot Gas Bypass Valve Control to MANUAL with Output Signal @ 0%</li> <li>- Current Setup Produces a Fixed Capacity of 2300 Tons</li> </ul> <p>05/19/2017</p> <ul style="list-style-type: none"> <li>- As Outdoor Air Temp drops the Chiller Capacity would have to be Reduced by Manually Opening the Hot Gas Bypass Valve. Instructed DuPont Operators on how to do this and Posted Instructions on the Chiller Panel</li> <li>- Chiller Capacity will need to be adjusted this way as long as the Chiller is Running, until ordered Replacement Parts have arrived</li> </ul> | Kevin Frazee |

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| Service Provided: |                 |                 |   |              |
|-------------------|-----------------|-----------------|---|--------------|
| Date              | Activity Number | Activity Status | Work Performed  | By           |
| 06/05/2017        | 1-NI40Z18       | Completed       | <ul style="list-style-type: none"> <li>- The CONOFLOW Rebuild Kits Arrived</li> <li>- Had Chiller Locked Out</li> <li>- Removed Vane Actuator from Compressor &amp; Completely Disassembled on Bench</li> <li>- Inspected all Parts, Measured Clearances, Saved and Review with the Manufacturer</li> <li>- The Old Lipseals had become clearly Thinner after a year of use, in comparison to the New Seals</li> <li>- Removed Piston Seals and O-Rings</li> <li>- Thoroughly Cleaned Piston Internals &amp; Coated w/ Molykote Light Grease</li> <li>- Installed new Lipseals and O-rings</li> <li>- Reassembled Actuator Piston &amp; Reattached to Compressor</li> <li>- Re-piped Actuator Components, Reversing Relay, and Gauges for Better Control &amp; Analysis of Function</li> <li>- Replaced Actuator Instrument Air Filter Element</li> <li>- Checked Operation of Actuator &amp; Calibrated Position / Signal</li> <li>- Actuator is now Functioning Properly</li> </ul> | Kevin Frazee |

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| Service Provided: |                 |                 |  |             |
|-------------------|-----------------|-----------------|--|-------------|
| Date              | Activity Number | Activity Status | Work Performed   | By          |
| 06/06/2017        | 1-NIQK2TN       | In Progress     | <ul style="list-style-type: none"> <li>- Had Chiller #7 Unlocked &amp; Started</li> <li>- Chiller would not Start due to Low Compressor Oil Diff Pressure</li> <li>- Discovered Oil Pressure Transducers slightly out of Calibration</li> <li>- Removed and Adjusted Oil Transducers</li> <li>- Manually Ran Compressor Aux. Pump (Pressure was Just Above 25 PSID*)</li> <li>- Attempted Increasing Pressure by Adjusting Pressure Relief Valve (Without Success)</li> <li>- Successfully Started Chiller</li> <li>- Placed PRV &amp; Hot Gas Bypass Valve back in AUTOMATIC Control</li> <li>- Inspected Operation of Chiller</li> <li>- Added 270 lbs of R-134A from Central Recovery Tank to complete Design Charge of 8,970lbs</li> <li>- Intercooler Float Valves Require Adjustment to Eliminate Gas Bypass into Evaporator</li> </ul> <p>* Pressure needs to be above 24 PSID to Start. Pump should be able to produce 55 PSID. Pump may need to be Rebuilt, Replaced, or there are Faulty Check Valve. This should be investigated next year at Shutdown) *</p> <p>* The Unused CONOFLOW Positioner &amp; Reversing Relay Rebuild Kits are being kept onsite for Future Use *</p> | Kevin Fraze |

| Labor Details: |            |       |         |       |           |              |               |              |
|----------------|------------|-------|---------|-------|-----------|--------------|---------------|--------------|
| Date           | Activity # | Hours | Type    | Miles | Asset ID  | Customer Tag | Serial Number | Model Number |
|                | 1-MSLG02F  |       |         | 10    | 1-EIZYN96 | CHILLER #7   | MRP626904     | OM3000       |
| 05/09/2017     |            | 1     | Regular |       |           |              |               |              |
|                | 1-MWF1K7R  |       |         | 45    | 1-EIZYN96 | CHILLER #7   | MRP626904     | OM3000       |

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| Labor Details:        |            |       |         |       |           |              |               |              |
|-----------------------|------------|-------|---------|-------|-----------|--------------|---------------|--------------|
| Date                  | Activity # | Hours | Type    | Miles | Asset ID  | Customer Tag | Serial Number | Model Number |
| 05/17/2017            |            | 5     | Regular |       |           |              |               |              |
| 05/19/2017            |            | 2     | Regular |       |           |              |               |              |
|                       | 1-NI40Z18  |       |         | 30    | 1-EIZYN96 | CHILLER #7   | MRP626904     | OM3000       |
| 06/05/2017            |            | 8     | Regular |       |           |              |               |              |
|                       | 1-NIQK2TN  |       |         | 30    | 1-EIZYN96 | CHILLER #7   | MRP626904     | OM3000       |
| 06/06/2017            |            | 8     | Regular |       |           |              |               |              |
| <b>TOTALS TO DATE</b> |            | 24    |         | 115   |           |              |               |              |

| Materials Used: |     |      |  |  |
|-----------------|-----|------|--|--|
| Activity #      | Qty | UOM  | Description  |  |
| 1-MWF1K7R       | 2   | Each | DOW CORNING MOLYKOTE 33 LOW-TEMPERATURE GREASE, 5.3 OZ. TUBE |  |
| 1-MWF1K7R       | 1   | Each | QUICKSHIP CHARGE   |  |
| 1-MWF1K7R       | 1   | Each | GH232T SPARE PARTS KIT                                       |  |
| 1-MWF1K7R       | 2   | Each | GFX04A 10 MICRON FILTER                                      |  |
| 1-MWF1K7R       | 2   | Each | CONOFLOW PARTS KIT FOR GC31 POSITIONER                       |  |
| 1-MWF1K7R       | 1   | Each | CONOFLOW PARTS KIT   |  |

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**Tool Charges:**

**Disposal, Environmental & Usage Charges\*:**

**Fuel Surcharge:**

**Miscellaneous:**

**Zone/Trip/Truck Charges:**

**Shipping /Handling Charges:**

**Per Diem:**

\* Disposal, Environmental & Usage Charges may include one or more of the following: miscellaneous electrical, pneumatic, welding supplies, hardware materials, or refrigerant reclaim disposal.

| Refrigerant Tracking: |                 |      |        |          |              |               |              |               |           |
|-----------------------|-----------------|------|--------|----------|--------------|---------------|--------------|---------------|-----------|
| Activity #            | Action Taken    | Type | Amount | Asset ID | Customer Tag | Serial Number | Model Number | Leak Location | Leak Rate |
| 1-<br>NIQK2TN         | Add Refrigerant | NA   | 270    |          | CHILLER #7   | MRP626904     | OM3000       | NA            | 3.01      |

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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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