### Graphic #10 Recirc AY1 Alarm Index

#### Alarm Description/Color

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<th>Alarm</th>
<th>Description/Color</th>
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<td>MK-AY101K4-1, AY101 Re-circ. Fan Inlet Damper MK-AY101K4-1 (OE) Yellow</td>
<td>3</td>
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<td>2</td>
<td>MK-AY101K4-2, AY101 Re-circ. Fan Outlet Damper MK-AY101K4-2 (OE) Yellow</td>
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<td>3</td>
<td>MK-AY101K4-3, AY101 Return Damper MK-AY101K4-3 (OE) Yellow</td>
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<td>MK-AY101K4-4, AY101 Bypass Damper MK-AY101K4-4 (OE) Yellow</td>
<td>6</td>
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<td>5</td>
<td>AY101-K4-5-1, AY101-K4-5-1 Re-circulation Fan (OE) Yellow</td>
<td>7</td>
</tr>
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<td>6</td>
<td>PDI-AY1-K45-1, HI, Recirc Fan AY101-K4-5-1 Diff. Pressure (HI) Yellow</td>
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<td>PDI-AY1-K48-1, LO, Recirc Condenser AY101-K4-8-1 Diff. Pressure (LO) Yellow</td>
<td>10</td>
</tr>
<tr>
<td>8</td>
<td>PDI-AY1-K48-1, HI, Recirc Condenser AY101-K4-8-1 Diff. Pressure (HI) Yellow</td>
<td>11</td>
</tr>
<tr>
<td>9</td>
<td>ZA-AY1-K4-1A, AY101 Tank Damper Lineup (Fault) Yellow</td>
<td>12</td>
</tr>
</tbody>
</table>

**Records**

No records are generated during the performance of this procedure.
1.0 PURPOSE

1.1 This attachment provides guidance to operators for responding to alarms associated with the AY/AZ ventilation system.

1.2 Section 3.0 provides guidance to operators for starting up the Monitor and Control System so that they may determine current alarm status if the system is not on line when they report to the control room.

2.0 PRECAUTIONS AND LIMITATIONS

2.1 Personnel Safety

2.1.1 Non-electrical worker accessing electrical enclosures must ensure the following:
- The enclosure must have a white label indicating that it has been evaluated.
- The work activity within the enclosure does not involve:
  - Reaching around or moving electrical equipment
  - Contacting electrical connectors/connections
  - By-passing protective shielding/barriers.

2.1.1.1 Stop and notify management if these conditions cannot be met, or if discrepancies exist (e.g. conflicting or missing labels, missing or damaged protective barriers).

3.0 OPERATION

3.1 IF system does not respond and appears to be locked, REFER to procedure TO-060-356 for instructions on re-setting and re-booting system AND

RETURN to this procedure.

3.2 OPERATE system in accordance with procedure TO-060-356.
**Respond to Monitor Control System Graphic #10 Recirc AY1 Alarms**

**Facility:** 401-AY Recirc Ventilation Bldg

**Graphic:** 10  
**Alarm #:** 1

**Source:** MK-AY101K4-1  
**Setpoint:** N/A

**Alarm Class:** Equipment Status

**Alarm Description:** AY101 Re-circ. Fan Inlet Damper MK-AY101K4-1 (Fault)

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**NOTE** - Alarm Response Procedures are not designed for, nor intended to be applied to "expected" alarms generated by approved work activities or procedures.

**Immediate Actions:**

1. **REQUEST** operator to **FIELD CHECK** position of damper MK-AY101K4-1 per operating mode.

<table>
<thead>
<tr>
<th>VALVE No.</th>
<th>MODE OF OPERATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>MK-AY101K4-1</td>
<td>RECIRC OPEN</td>
</tr>
<tr>
<td></td>
<td>BYPASS CLOSED</td>
</tr>
<tr>
<td></td>
<td>HI HEAT OPEN</td>
</tr>
</tbody>
</table>

2. **IF** damper MK-AY101K4-1 is not in the correct position, **REPOSITION** per the operating mode.

3. **NOTIFY** Shift Manager of actions and findings.

**Possible Causes:**

1. Damper MK-AY101K4-1 is not fully open or fully closed, but in some mid position.
2. Failed limit switch.
3. Instrument error.

**References:**

- **Drawings:** H-14-020106, Sht 1
Facility: 401-AY Recirc Ventilation Bldg

Graphic: 10  
Alarm #: 2

Source: MK-AY101K4-2  
Setpoint: N/A

Alarm Class: Equipment Status

Alarm Description: AY101 Re-circ. Fan Outlet Damper MK-AY101K4-2 (Fault)

NOTE - Alarm Response Procedures are not designed for, nor intended to be applied to "expected" alarms generated by approved work activities or procedures.

Immediate Actions:

[1] REQUEST operator to FIELD CHECK position of damper MK-AY101K4-2 per operating mode.

<table>
<thead>
<tr>
<th>VALVE No.</th>
<th>MODE OF OPERATION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>REcirc</td>
</tr>
<tr>
<td>MK-AY101K4-2</td>
<td>OPEN</td>
</tr>
</tbody>
</table>

[2] IF damper MK-AY101K4-2 is not in the correct position, RE-POSITION per the operating mode.


Possible Causes:

1. Damper MK-AY101K4-2 is not fully open or fully closed, but in some mid position.
2. Failed limit switch.
3. Instrument error.

References:

Drawings: H-14-020106, Sht 1
Facility: 401-AY Recirc Ventilation Bldg

Graphic: 10  Alarm #: 3
Source: MK-AY101K4-3  Setpoint: N/A

Alarm Class: Equipment Status
Alarm Description: AY101 Return Damper MK-AY101K4-3 (Fault)

NOTE - Alarm Response Procedures are not designed for, nor intended to be applied to, "expected" alarms generated by approved work activities or procedures.

Immediate Actions:

[1] REQUEST operator to FIELD CHECK position of damper MK-AY101K4-3 per operating mode.

<table>
<thead>
<tr>
<th>VALVE No.</th>
<th>MODE OF OPERATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>MK-AY101K4-3</td>
<td>RECIRC</td>
</tr>
<tr>
<td></td>
<td>OPEN</td>
</tr>
</tbody>
</table>

[2] IF damper MK-AY101K4-3 is not in the correct position, RE-POSITION per the operating mode.


Possible Causes:
1. Damper MK-AY101K4-3 is not fully open or fully closed, but in some mid position.
2. Failed limit switch.
3. Instrument error.

References:
Drawings: H-14-020106, Sht 1
Facility: 401-AY Recirc Ventilation Bldg

Graphic: 10  Alarm #: 4

Source: MK-AY101K4-4  Setpoint: N/A

Alarm Class: Equipment Status
Alarm Description: AY101 Bypass Damper MK-AY101K4-4 (Fault)

NOTE - Alarm Response Procedures are not designed for, nor intended to be applied to "expected" alarms generated by approved work activities or procedures.

Immediate Actions:
[1] REQUEST operator to FIELD CHECK position of damper MK-AY101K4-4 per operating mode.

<table>
<thead>
<tr>
<th>VALVE No.</th>
<th>MODE OF OPERATION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>RECIRC</td>
</tr>
<tr>
<td>MK-AY101K4-4</td>
<td>CLOSED</td>
</tr>
</tbody>
</table>

[2] IF damper MK-AY101K4-4 is not in the correct position, RE-POSITION per the operating mode.


Possible Causes:
1. Damper MK-AY101K4-4 is not fully open or fully closed, but in some mid position.
2. Failed limit switch.
3. Instrument error.

References:
Drawings: H-14-020106, Sht 1
Facility: 401-AY Recirc Ventilation Bldg

Graphic: 10  Alarm #: 5
Source: AY101-K4-5-1  Setpoint: N/A

Alarm Class: Equipment Status
Alarm Description: AY101-K4-5-1 Re-circulation Fan (Fault)

NOTE - Alarm Response Procedures are not designed for, nor intended to be applied to "expected" alarms generated by approved work activities or procedures.

Automatic Actions:

1. AY101-K4-5-1 fan will shut down.

Immediate Actions:

[1] IF re-circulation fan AY101-K4-5-1 is shut down, FIELD CHECK status of power supply breaker and disconnect switch (located on recirc module outside wall).

[2] IF breaker or disconnect switch is found to be tripped, DO NOT reenergize re-circulation fan.

[3] IF re-circulation fan AY101-K4-5-1 is NOT shut down, but is in alarm (fault) condition, PERFORM the following:

[3.1] CHECK AY101-K4-5-1 motor for excessive current using II-AY1K45-1.

[3.2] CHECK re-circulation fan AY101-K4-5-1 for high differential pressure using PDI-AY1K45-1.

[3.3] CHECK condenser for low differential pressure using PDI-AY1K48-1.

Supplemental Actions:


(Continued on Next Page)
Respond to Monitor Control System Graphic #10 Recirc AY1 Alarms

Facility: 401-AY Recirc Ventilation Bldg

Graphic: 10  Alarm #: 5

Source: AY101-K4-5-1  Setpoint: N/A

YELLOW

AY101-K4-5-1
OE

(Continued)

Possible Causes:
1. Re-circulation Fan AY101-K4-5-1 breaker tripped.
2. Re-circulation Fan AY101-K4-5-1 mechanically failed.
3. Instrument error.
4. Plugged line.
5. Low differential pressure on PDI-AY1K48-1, indicating little or no flow through re-circulation loop.

References:
Drawings: H-14-020106, Sht 1
Respond to Monitor Control System Graphic #10 Recirc AY1 Alarms

Facility: 401-AY Recirc Ventilation Bldg

Graphic: 10  
Alarm #: 6

Source: PDI-AY1K45-1  
Setpoint: 24.00 Inches. WG

Alarm Class: Plant Stability

Alarm Description: Recirc Fan AY101-K4-5-1 Diff. Pressure high (HI)

NOTE - Alarm Response Procedures are not designed for, nor intended to be applied to "expected" alarms generated by approved work activities or procedures.

Immediate Actions:

[1] CHECK system is in RECIRC or HIGH HEAT mode (i.e., re-circulation fan should be running).

[2] CHECK dampers MK-AY101K4-1 and MK-AY101K4-2 are OPEN.

[3] CHECK PDI-AY1K48-1 is not in alarm state.


Possible Causes:

1. Re-circulation fan AY101-K4-5-1 discharge damper MK-AY101K4-2 closed.
2. Re-circulation fan AY101-K4-5-1 inlet damper MK-AY101K4-1 closed.
3. Differential pressure instrument isolation valves closed.
4. Differential pressure instrument tubing plugged or damaged.
5. Instrument error.
6. Condenser or moisture separator plugged.

References:

Drawings:  H-14-020106, Sht 1
Facility: 401-Ay Recirc Ventilation Bldg

Graphic: 10               Alarm #: 7

Source: PDI-Ay1K48-1       Setpoint: 2.00 Inches WG

Alarm Class: Plant Stability
Alarm Description: Recirc Condenser Ay101-K4-8-1 Diff. Pressure low(LO)

NOTE - Alarm Response Procedures are not designed for, nor intended to be applied to "expected" alarms generated by approved work activities or procedures.

Automatic Actions:
1. The Ay101 re-circulation fan Ay101-K4-5-1 will shut down on interlock.

Immediate Actions:
[1] ENSURE proper damper alignment.
[2] IF all parameters are within specifications, PERFORM the following:
   [2.1] CHECK there is no breach in system.
   [2.2] CHECK there are no equipment malfunctions.

Possible Causes:
1. Breach in condenser Ay101-K4-8-1.
2. Fan Ay101-K4-5-1 failure.
3. Equipment associated with PDI-Ay1K48-1 obstructed.
4. Improper damper configuration.
5. Maintenance or PM.

References:
Drawings: H-14-020106, Sht 1
Facility: 401-AY Recirc Ventilation Bldg

**Graphic:** 10
**Alarm #:** 8

**Source:** DI-AY1K48-1
**Setpoint:** 18.00 Inches WG

**Alarm Class:** Plant Stability
**Alarm Description:** Recirc Condenser AY101-K4-8-1 Diff. Pressure high (HI)

**NOTE** - Alarm Response Procedures are not designed for, nor intended to be applied to "expected" alarms generated by approved work activities or procedures.

**Immediate Actions:**

1. **CHECK** for high differential pressure indication of condenser PDI-AY1K48-1.
2. **NOTIFY** Shift Manager of findings.

**Possible Causes:**

1. Condenser shell blockage.
2. High flow through AY101-K4-8-1.
3. Differential pressure instrument isolation valves closed.
4. Differential pressure instrument tubing plugged or damaged.

**References:**

Drawings: H-14-020106, Sht 1
Facility: 401-AY Recirc Ventilation Bldg

Graphic: 10  Alarm #: 9

Source: Numerous Dampers  Setpoint: N/A

Alarm Class: Environmental Impact
Alarm Description: AY101 Tank Damper Lineup (Fault)

NOTE - Alarm Response Procedures are not designed for, nor intended to be applied to "expected" alarms generated by approved work activities or procedures.

Immediate Actions:
[1] **REQUEST** operator to **FIELD CHECK** position of dampers per operating mode.

<table>
<thead>
<tr>
<th>VALVE No.</th>
<th>MODE OF OPERATION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>RECIRC</td>
</tr>
<tr>
<td>MK-AY101K4-1</td>
<td>OPEN</td>
</tr>
<tr>
<td>MK-AY101K4-2</td>
<td>OPEN</td>
</tr>
<tr>
<td>MK-AY101K4-3</td>
<td>OPEN</td>
</tr>
<tr>
<td>MK-AY101K4-4</td>
<td>CLOSED</td>
</tr>
</tbody>
</table>

[2] **IF** system is in RECIRC mode or HIGH HEAT mode, **ENSURE** re-circulation fan AY101-K4-5-1 is operating.

[3] **NOTIFY** Shift Manager of actions and findings.

Possible Causes:
1. Damper out of specified lineup position for mode required selected.
2. Re-circulation fan failure.
3. Failed limit switch.
4. Instrument error.

References:
Drawings: H-14-020106, Sht 1