



Aromat Corporation - Lighting Division

AID009

*Retrofit Guidelines
for
Aromat NAiS DCP™
Metal Halide Electronic Ballasts*

NAiS[®]

Please sign below to acknowledge receipt of AID009:

Signature/Date

The source ...

for Lighting Components and Product Design Expertise for the Luminaire Manufacturer

For more information, call: **1-888-4-AROMAT**

Visit our Web Site: **www.aromat.com**

Retrofit Project Approval Procedure:

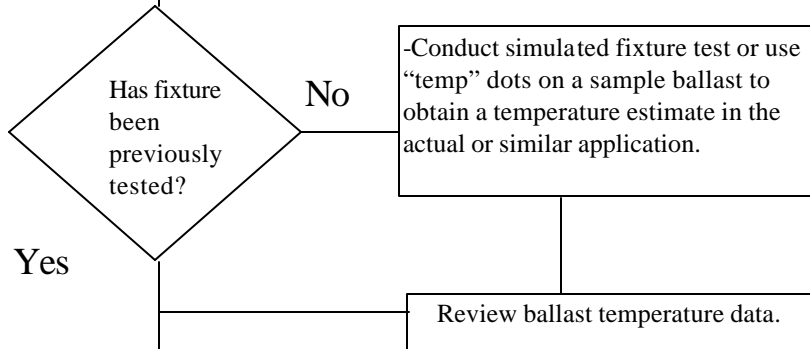
REQUEST:

“Retrofitter” /contractor must first obtain Aromat approval by calling the Aromat Technical Center at 1-619-592-7931 & requesting Retrofit Guidelines-AID009. After reception, the “Project Request form” (page 4 of AID009) must be filled out, AID009 cover page signed and both faxed to Aromat at 1-619-592-7931.

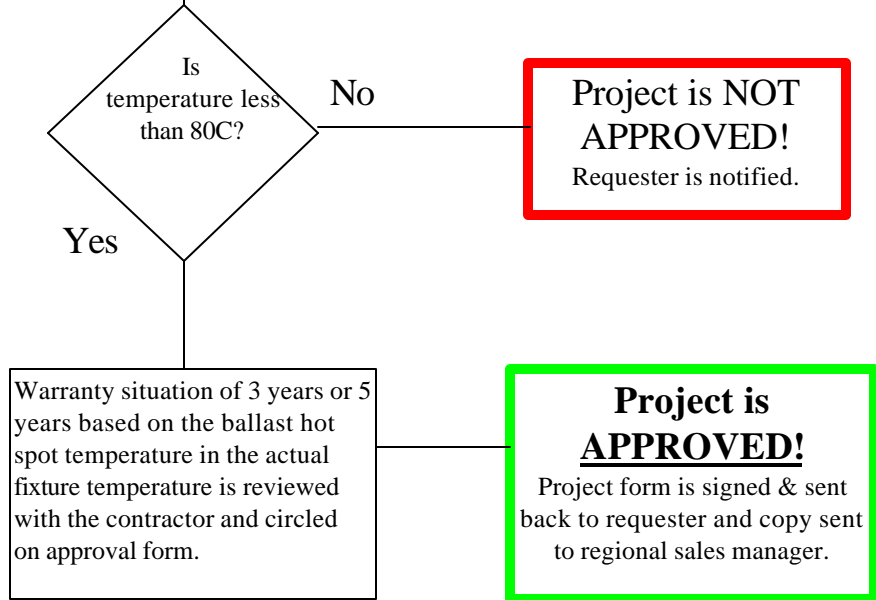
REVIEW:

Aromat Technical Center reviews project information primarily for proper:
-Compatible lamp
-Estimated ballast operating temperature.
TC requests additional data, if necessary; reviews fixture testing data base for previous temperature test results and for any special mounting recommendations; notifies contractor of “wrong” lamp usage & obtains revised form with proper lamp listed.

TEMPERATURE ESTIMATE:



APPROVAL DECISION:



Aromat NAI S DCP™ Electronic Metal Halide Ballast
Retrofit Project Request Form

↳ **General Information:**

Installation Company Name : _____

Contact person: _____ Phone #: _____

Address: _____ City: _____ State: _____ ZIP _____

Retrofit Project Building/Company name: _____

Project Address: _____ City: _____ State _____ ZIP _____

↳ **Project Description:**

Fixture description: (include manufacturer, model or style, modifications planned, existing, ballast location, future ballast location, etc.; submit sketches if necessary.): _____

Fixture Quantity: _____ # Ballasts/fixture: _____ Ballast Input Voltage _____

Ballast Mounting (circle one) EU F J

Metal Halide Lamp Information: Wattage/Style: _____ Lamp Mfr. _____

Lamp product #: _____

↳ **Project Rationale:**

Description of retrofit objective/previous fixture problem: _____

↳ **Requestor**

Requested by: _____ Date: _____

Print Name

Signature

↳ **Warranty:**

The approval of this project does not grant or infer any warranty of the ballast as the warranty is only based on the actual operation in the fixture in the final application! Based on the information provided, the estimated ballast temperature would result in a possible warranty situation of:

Circle one: Three (3) years: (Ballast temperature: $75^{\circ}\text{C} < T_c < 80^{\circ}\text{C}$)

Five (5) years: (Ballast temperature: $T_c < 75^{\circ}\text{C}$)

↳ **Aromat Approval:**

AROMAT INSTRUCTION DOCUMENT: AID009

Approved by: _____ Date: _____

Print Name

Signature

Retrofit Guidelines for Aromat NAIS DCP™ Electronic MH Ballasts**General Information:::**

The following “retrofit guidelines” are presented to assure that any retrofit project utilizing Aromat DCP™ Electronic Metal Halide Ballasts is successfully planned and completed with the proper emphasis on:

- Safety
- Long term reliability
- System Compatibility

As an assistance in reviewing the following procedures, some critical operating features of the Aromat NAIS DCP™ Electronic Metal Halide Ballast must be read and understood:

1. SHUTDOWN FEATURE: The NAIS DCP™ Electronic ballast has a **”shutdown” feature that turns off the ballast output** after approximately 30 minutes if a lamp does not start or operate properly. **THE INPUT POWER TO THE BALLAST MUST BE RESET** (turn power off and then back on) to start a new lamp.

2. DIFFERENT WIRING DIAGRAM: The NAIS DCP™ Electronic ballast **CANNOT HAVE THE SCREW-SHELL** of the lampholder connected back to neutral! If either “lamp” lead is shorted or connected to neutral or white input lead or chassis ground, the ballast will fail. **AROMAT WILL NOT PROVIDE ANY WARRANTY FOR BALLAST FAILURES CAUSED BY GROUNDED OR MIS-WIRED OUPUT LEADS.**

3. LAMP COMPATABILITY: Not all metal halide lamps have been tested on or are compatible with electronic MH ballasts. “Ceramic” arc tube MH lamps are highly recommended. If “quartz” lamps are used, both the lamp manufacturer and Aromat should be consulted for compatibility with NAIS DCP™ Electronic ballasts.

4. THERMAL PROTECTION: The NAIS DCP™ Electronic ballast has an automatic resetting thermal protector which will turn the ballast off if the fixture becomes overheated and the ballast case temperature approaches 85°C.

GENERAL CAUTIONARY NOTES:

1. Always disconnect power to the entire fixture before any installation and/or removal of ballasts or controls.
2. The ballast case and (metal) fixture must be grounded!
3. Install per the applicable national and local electrical codes!
4. Dispose of any replaced ballasts and lamps properly!

AROMAT INSTRUCTION DOCUMENT: AID009

Recommended Retrofit Procedures:

Initial Preparation:

1. Approval of all retrofit projects must first be obtained from Aromat Application Engineering. Please contact Aromat Technical Center at 1-619-592-7931 for proper forms and application guidance.
2. Obtain proper 4KV pulse rated lampholder including the insulating liner; we recommend Leviton #70045.
3. Determine the shortest round head screws needed to mount the new lampholder
4. Procure proper lampholder lead wire with 18AWG, 150°C, 300VAC minimum rating.(UL style 3068)
5. Determine if intended lamp is "APPROVED" for operation on electronic ballasts.

Consult lamp manufacturer or Aromat for lamp compatibility.

General

Comments

**TURN OFF POWER TO
FIXTURES!**

■ Use proper lock-out procedures. (A 4KV pulse can ruin your day!)

Demolition:

6. Remove ballast, cap, & ignitor (if MH fixture)
7. Remove lampholder and all old wiring

■ For long life & reliability , let's use new wiring and new lampholders!

Installation: Output Circuit:

8. Using shortest screws possible, install the new lampholder with the insulating liner between the socket and the mounting surface.
9. Install the proper Aromat ballast, making sure to not to pinch any leads
10. Connect the (2) blue ballast leads to the lampholder terminals or to the 4KV pulse rated leads form the lampholder.

NOTE: The ballast blue leads or the lampholder leads CANNOT be connected to neutral or ground!!

11. Twist leads together, terminate with appropriate wire nut or crimp connector AND add wrap of electrical tape around connection & down the leads approximately 1/2 inch.

■ Screw head or shaft CANNOT be close to the screw shell or arcing may result.

■ No polarity on output lead connections.

■ It is very difficult to hipot in the field to test for possible shorts, so electrical tape is added to prevent possible frayed-strands-to-ground-shorts.

Output Test:

12. Test "CONTINUITY" of both lampholder contacts to ground; per Appendix 1.

■ To verify output leads are not contacting ground.

Remedy:

- Examine wiring & lampholder mounting for pinched leads to ground, frayed strands, cut lead insulation, shorts inside lampholder or mis-wiring.
- Remedy the "short" and then retest!

YES

Is there a "short" to ground?

NO

To Installation: Input

Circuit

Recommended Retrofit Procedures continued:

From no shorts on "output test:"

Installation: Input Circuit:

- 13. Wire the "insulation detector" to the appropriate power supply connections.
- 14. Connect the ballast black, white & (if provided) green leads to the insulation detector leads and/or respective power supply wiring..
- 15. Terminate in the same manner as the output leads, including the additional tape wrap.

■ Insulation detector required on recessed fixtures only!

Installation: Metal Halide Lamp:

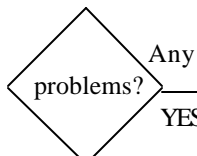
- 15. Install a ceramic MH lamp or an "APPROVED" metal halide lamp. Please note: NOT ALL MH LAMPS ARE COMPATIBLE WITH ELECTRONIC BALLASTS; PLEASE CONSULT WITH LAMP MANUFACTURER OR AROMAT BEFORE PURCHASING LAMPS.

■ Ceramic MH lamps are recommended for the highest system performance.

System Checkout:

- 16. Reconnect input power
- 17. Check each fixture for proper starting and normal operation.

■ Examine each fixture for uniform color and brightness.



Consult Aromat "Trouble shooting Guide, AID008"

DONE

The source ...

for Lighting Components and Product Design Expertise for the Luminaire Manufacturer

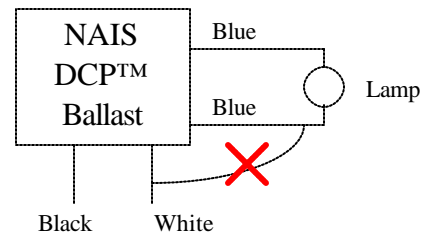
For more information, call: **1-888-4-AROMAT**

Visit our Web Site: **www.aromat.com**

APPENDIX 1: OUTPUT LEADS-TO-GROUND TEST

Unlike magnetic HID ballasts, Electronic HID ballasts CAN NOT have the white (neutral) power lead connected to the lamp screw-shell. The output of the Electronic HID ballast is “floating” from the neutral line and a ballast **will fail** if either blue lamp lead is connected to white (neutral) or ground. AROMAT WILL NOT PROVIDE ANY WARRANTY FOR BALLAST FAILURES CAUSED BY GROUNDED OR MIS-WIRED OUPUT LEADS.

DO NOT CONNECT ANY
LAMP LEADS TO WHITE,
NEUTRAL OR GROUND!



Immediately after the connection of the output leads to the metal halide lampholder:

- 1) Verify fixture lampholder leads **are not** connected to **neutral** or **ground** with a continuity tester. See Figure 1 below:

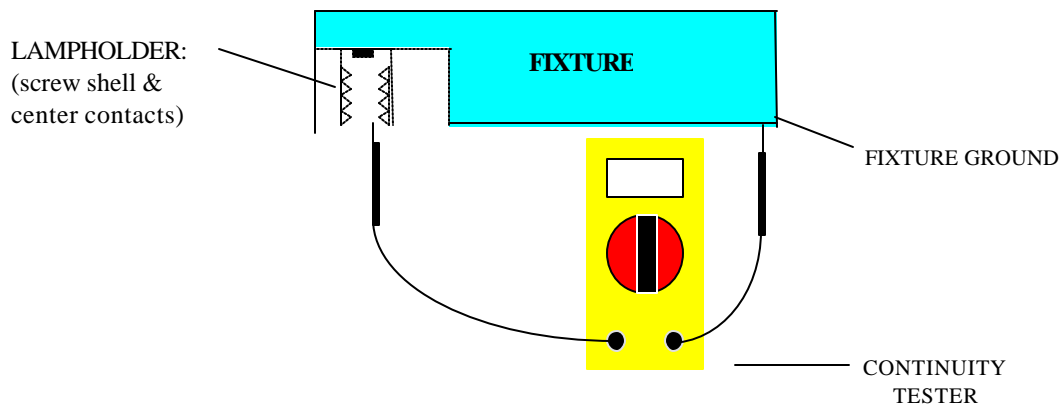


Figure 1: Continuity Measurement Diagram

- 2) Measure continuity from ground to the lampholder screw-shell and also from ground to center contact. The readings shall show no continuity or greater than 10 mega-ohms on an ohm-meter.