Service Bulletin

Increasing the lifetime of Power LED on RALCO Collimators and avoiding stripes in Collimator light

Task

Timing	Category	Scope
Next service as agreed with customer	○ **Apply at all sites** ● **Apply at affected sites as listed below** ○ **Optional to improve functionality of product**	**Problem Record: PRB0052585, PRB0052116**

Task Tracking

After completion of your task the following entry in your Service Report is required: **DD+DIS178.16E** *

* Insert the document number into the field "Comment" (SMS form).

Purpose of this document:

It contains:

- Information about new RALCO collimator Power LED with increased lifetime and its replacement.
- Information about LED current reduction to 3.4 A and its adjustment. This increases LED lifetime further and additionally avoids collimator shadows (stripes).
- Solution for listed problem records.

Affected serial number(s) / batch: For Power LED replacement, refer to section 1.1.1 Affected Systems.

The signatures on the approval page indicate the solutions described in this Service Bulletin have been reviewed and are NOT reportable because no actions are taken to reduce a "Risk to Health" according to our risk assessment process.

NOTE:

This Bulletin replaces the earlier Service Bulletins:

- DD+DIS039.16E, Regular lines in the collimator light field on FLFS images …, Document ID 54262651 and
- DD+DIS084.16E, Preventive replacement of RALCO collimator Power LED …, Document ID 54831142

List of contents

1 Introduction/purpose

1.1 PRB0052585: High spare part consumption of Power LED (collimator LED)

Symptom High spare part consumption of Power LED components.

Cause Overheating due to low thermal dissipation characteristics.

Solution In order to increase the lifetime for the RALCO collimator Power LED components, the current design has been improved. The improved LED components have been introduced in production. The Power LED is compatible to previous version.

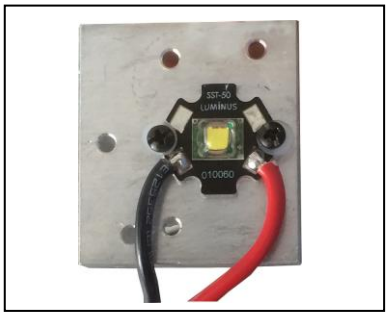

Figure 1: Current Power LED (A525157-01)

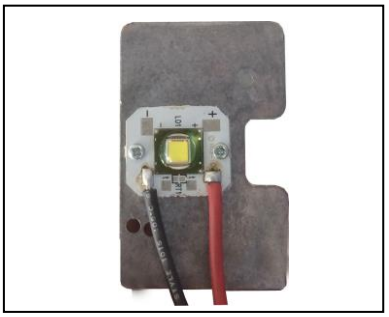

Figure 2: Improved Power LED (A525343-01)

A) To avoid an unplanned machine-down situation it is recommended to replace during next maintenance activity the current Power LED by the improved one.
For exchange instructions refer to section 3.1.
For affected sites refer to the list of affected systems below.

B) Adjusting current to approximately 3.4 A (+/- 5%) will increase LED lifetime without a significant loss of luminosity.
Always adapt the power consumption of the LED:
   - in case the Power LED is exchanged or
   - the timer PCB is exchanged.

   For adjustment instructions refer to section 3.2.

   The LED current adjustment additionally avoids regular stripes in the collimator light (details see section 1.2).

1.1.1 Affected Systems (preventive update)

NOTE:
Some of the listed Systems might have been already updated in the field with the improved LED light components in the past.

Systems:	DX-D 100	DX-D 100 Wireless	DX-D 300
Up to SN:	A5410000134	A5411000383	A8207001205

Systems:	DX-D 400	DX-D 600	DX-D 800
Up to SN:	A5420000098	A5430000135	DLJ034

1.2 PRB0052116: Regular stripes in the collimator light

Symptom Collimator light shows shadow / black stripes that look like moiré stripes on FLFS images.

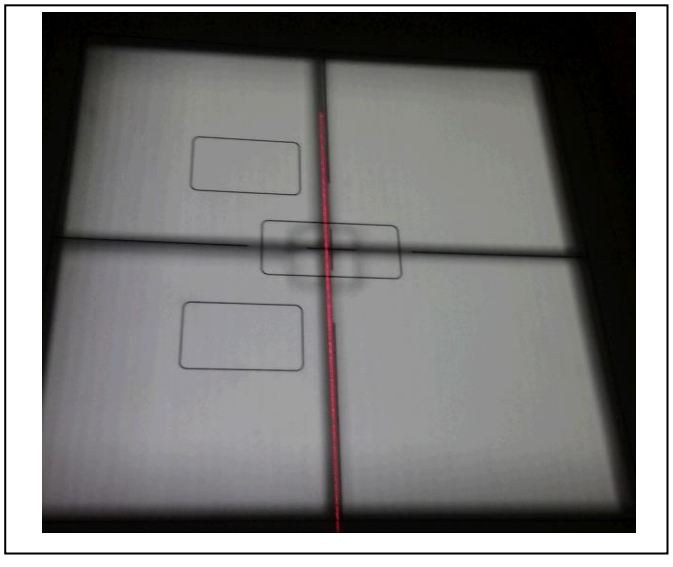

Figure 3

Cause Power LED current settings needs to be adjusted after replacement of the Power LED.

Solution Adjust the LED current to approximately 3.4 A (+/- 5%). For details refer to section 3.2.

2 Prerequisites

NOTE:
The new spare part number SC+A525343-01 replaces the previous SC+A525157-01.

SPARE PARTS:

- Power LED SC+A525343-01

TOOLS:

- Standard service tool kit
- Multimeter

REFERENCED DOCUMENTS:

For Power LED Replacement instructions refer to the appropriate Ralco Manuals in the Agfa HealthCare Library:

- Collimator Ralco R225 ACS - Service Manual - DX-D 300 / DX-D 600 / DX-D 800, Document ID 41588872.
- Collimator Ralco R225 DHHS - Service Manual - DX-D 400 / DX-D 600, Document ID 46857177
- Collimator Ralco R221/A - Service Manual - DX-D 100 / DX-D 100 Wireless, Document ID 43902618

IMPORTANT:
The installation and service of the product(s) described herein is to be performed by qualified personnel who are employed by Agfa HealthCare N.V or one of its affiliates or who are otherwise authorized by Agfa HealthCare N.V. or one of its affiliates to provide such services.

3 Instructions

REQUIRED TIME:
Approximately 1 hour for the exchange of the Power LED and the current adjustment

3.1 Exchange of Power LED

(1) Disconnect power supply.
(2) Remove the cover. Refer to chapter - COVER REMOVAL in the appropriate collimator manual. See “Referenced Documents” in section 2.
(3) Exchange the Power LED as described in the appropriate collimator manual.

IMPORTANT:
Make sure that the cables do not cover the LED light and that they are routed in a way that the LED light can freely enter the collimator.

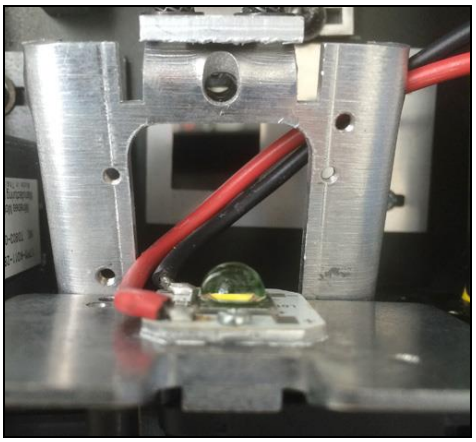

Figure 4: Power LED (Example)

(4) After exchange of a Power LED adjust the output current intensity as described in section 3.2 Adjustment of LED output current.

3.2 Adjustment of LED output current

Perform the current adjustment after the Power LED or the timer PCB was exchanged:

(1) Adjust the output current intensity to the LED to approximately 3.4 A (+/- 5%) with the TR1- CURRENT CONTROL potentiometer (see Figure 5).

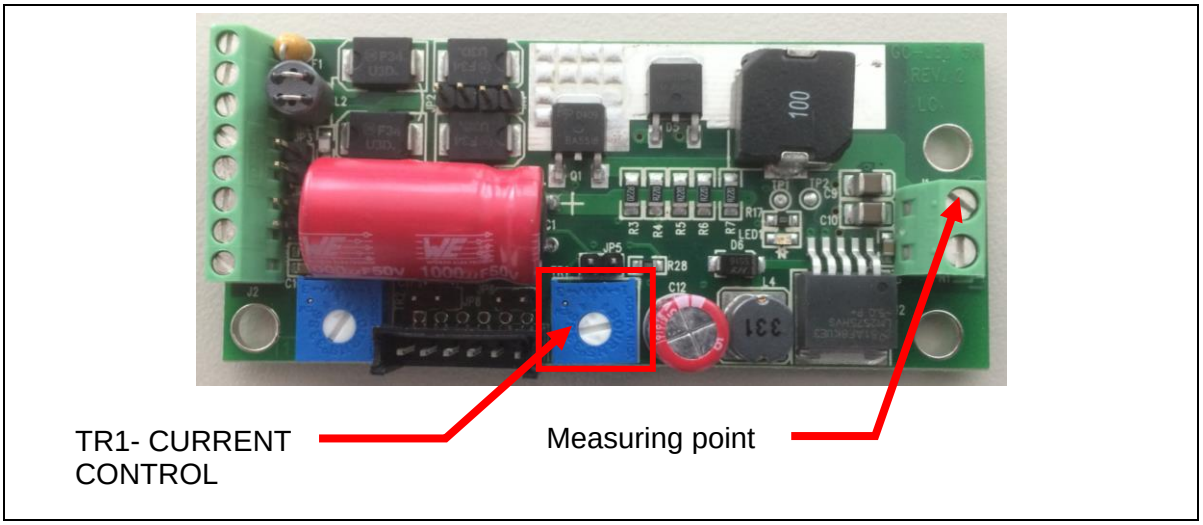

Figure 5: GC-LED 5A PCB (Timer PCB), new version

(2) Put the multimeter in series connection into the connection block on the right side of the board – green part with two screws.

For measurement the light switch has to be activated. At this point in time the cover is not mounted. There are two alternatives, see below.

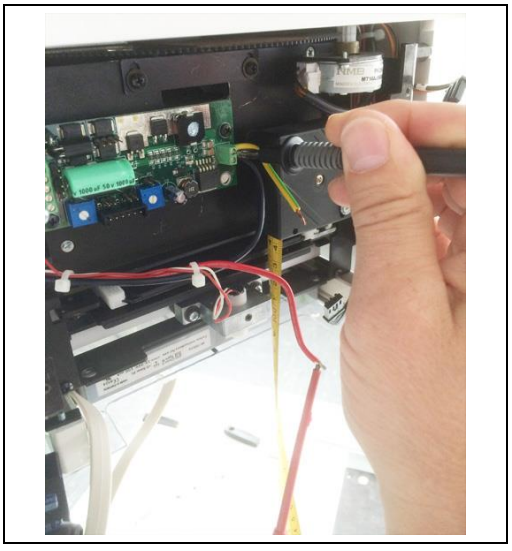

Figure 6: measuring

Two alternatives for light switch activation:

(3) Either short circuit the plug connected to the cover with a screw driver.

or

Figure 7: plug short circuit

IMPORTANT:

Perform the following alternative only with two people: One person has to hold the cover (which is hanging on its cables) and the other one performs the measurements.

(3) Connect the cover and press the button.

(4) Install the covers.

4 Verification

(1) Perform an Acceptance Test for the collimator relevant tests.
Check the collimator lights for stripes and shadows.

5 Keywords

Collimator, LED, current settings, preventive maintenance

6 Version history

Version	Change	Date
1.0	Initial Version	12-2016

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Signatures:

1. Josef Wagner (agwj) on 2016-12-20 02:45 PM CET
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