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Technical Bulletin 07/01

Dated: 12.02.07

Subject: T12 Lamps Used With Victor Excalibur & Trident Exe Fluorescent Luminaires

Background

In response to recent issues with regards the use of T12 lamps, either mono-pin or bi-pin in the above products, please see below a statement meant to advise and clarify the situation for end users.

With the initial launch of the Trident Exe fluorescent luminaire in 2004, a newly designed ballast was incorporated.

Because it proved to be very reliable during the testing phase it was decided to also introduce it into the Excalibur. All Excalibur's or replacement Excalibur ballasts supplied after Dec 2004 would have this new ballast incorporated. One of the key features of this new ballast was the introduction of an End Of Lamp Life (EOL) function,

EOL (End of Lamp Life) Function

This is intended to detect that the lamp is nearing, or has reached the end of its life and will switch off the power to the lamp before any damage is done to the lamp, lampholders, ballast or luminaire. The EOL functionality was added to the standard covering Exe fluorescent products (IEC 60079-7), in July 2006.

- The main change at the introduction of EOL circuitry is that the ballast now has an upper power limit set.
- During the life of a lamp the power needed by the ballast to run the lamps at a constant voltage increases as the lamp cathodes wear.

Note

In ballasts without the EOL feature, this extra power can increase to a point where the extra heat generated can cause problems with the ballast itself, the lampholders or the lamps. Planned lamp maintenance can eliminate this issue. To date we have no reported issues with our ballasts due to end of lamp life problems.

The EOL feature limits the extra power that the ballast can generate to a design level of 10W.

Further information on this subject is available on our website under the title "End of Life Phenomenon" - www.victor-lighting.com/news.htm



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Current Issue

Although the Excalibur ballast is still certified to run either T12 20/40W or T8 18/36W fluorescent tubes, the construction style of the old T12 lamps when used with a ballast with EOL circuitry can lead to unreliable starting and running of the lamps.

Two problems could occur,

- Firstly at switch on the T12 lamps are more difficult to start, which can lead to the ballast shutting off before the lamp has struck.
- Secondly, when the T12 lamps are running, if the power needed to drive them gets above the pre-set 10W level in the ballast, the ballast will shut down, switching off the lamps. If the power is interrupted then re-applied the lamps would normally come back on, but would eventually switch off again once they reach the high power threshold. Although only one lamp may be affected in this way, because the ballast has a series circuit, this would cause the second lamp to switch off as well.

It was not possible to have the EOL detection designed in such a way as to reliably detect both the T8 lamps and the T12 ones. As the T8 lamps are the newer of the two our decision was to design the circuitry to suit the latest technology as opposed to a lamp which may be obsolete soon.

Identification of Lamps

T12 lamps have a diameter of 38mm (1 ½")

T8 lamps have a diameter of 25mm (1")

Recommendation

Going forward it is our recommendation that as lamps are replaced in future, only T8 lamps are used.

The Trident has only ever been supplied as a bi-pin product.

The Excalibur has been supplied as both a bi-pin or mono-pin product. If changing from a T12 mono-pin to a T8 mono-pin, a lamp centring ring should be purchased to ensure the smaller diameter T8 lamp is held correctly in place.

Lamp centring ring partcode – V149704 (2-off required per luminaire)

If any further information is required on this subject, please contact the undersigned or a member of the Technical Sales Support team at the Glasgow office.

Yours Sincerely



Ian MacLeod
Technical Manager