Account No. _____

Book No. _____

EMERGENCY LIGHTING USERS HANDBOOK

TAILORED FIRE & SECURITY

Redetec House, 8 Saville St, Bolton, Lancs. BL2 1BY

NOTE! This is an important document and must be kept on site readily available for:-

- Local Fire Brigade Officers
- Authorized Persons from Local Authority
- Tailored Fire and Security Systems Service engineers

Bolton
Tel No. 0870 429 9705
Fax No. 0870 429 9706
www.tfs-ltd.com

Manchester
Tel No. 0870 429 9707
Fax No. 0870 429 9708
www.redetec.co.uk

SERVICE / MAINTENANCE AND INSTALLERS OF:

FIRE ALARM, INTRUDER ALARM SYSTEMS, EMERGENCY LIGHTING, CCTV, ACCESS CONTROL, PUBLIC ADDRESS, TOXIC ALARM

SECTION 2 - EMERGENCY LIGHTING SYSTEM USERS HANDBOOK

CONTENTS

Section 2 - Emergency Lighting System

SERVICING

Supervision

Regular servicing is essential. The occupier/owner of the premises should appoint a competent person to supervise the system. This person should be given sufficient authority to ensure the carrying out of any work necessary to maintain the system.

Batteries

In all cases the manufacturer's instructions should be followed. It is particularly important that where applicable:

a) the tops of batteries and their terminals are kept clean and unobstructed and that battery cases are periodically checked for leaks;

b) the electrolyte is at all times kept at the correct level as recommended by the manufacturer;

c) any replacement battery should be compatible with the battery charger;

d) any replacement cell should be compatible with the battery;

e) any replacement battery charger should be compatible with the battery.

Generators

The manufacturer's instructions as given in the associated instruction manual or other literature should always be followed. It should be noted, however, that the failure of engines to start up readily often arises from poor maintenance or defects in the starting battery or in electromechanical apparatus e.g. relays incorporated in the starting system.

Dust and damp, singly or in combination, can have an adverse effect on electromechanical apparatus and it is therefore important that a system of regular cleaning and, where necessary, adjustment is carried out.

Some parts of the starting system may be sited where they are subject to vibration and great care should therefore be taken in such instances to ensure that all connections are mechanically and electrically sound.

It is essential that air intakes and exhausts are unobstructed.

Routine inspections and tests

General

Because of the possibility of a failure of the normal lighting supply occurring shortly after a period of testing of the emergency lighting system or during the subsequent recharge period, all tests should wherever possible be undertaken at time of minimum risk.

Alternatively, suitable temporary arrangements should be made until the batteries have been recharged.

Inspections and tests should be carried out at the following intervals as recommended below:

a) daily;

b) monthly;

c) six-monthly;

d) three-yearly;

e) subsequent annual test.

Daily

An inspection should be made every day to ascertain that:

a) any fault recorded in the log book has been given urgent attention and the action noted;

b) every lamp in a maintained system is lit;

c) the main control or indicating panel of each central battery system or engine driven generator plant indicates normal operation;

d) any fault found is recorded in the log book and the action taken noted.

Monthly

An inspection should be made at monthly intervals in accordance with a systematic schedule. A model schedule is illustrated in annex D.

Tests should be carried out as follows:

a) Each self-contained luminaire and internally illuminated exit sign should be energized from its battery by simulation of a failure of the supply to the normal lighting for a period sufficient only to ensure that each lamp is illuminated.

The period of simulated failure should not exceed one quarter of the rated duration of the luminaire or sign.

During this period all luminaires and/or signs should be examined visually to ensure that they are functioning correctly.

At the end of this test period the supply to the normal lighting should be restored and any indicator lamp or device checked to ensure that it is showing that the normal supply has been restored.

b) Each central battery system should be energized from its battery by simulation of a failure of the supply to the normal lighting for a period sufficient only to ensure that each lamp is illuminated.

The period of simulated failure should not exceed one quarter of the rated duration of the battery.

During this period all luminaires and/or signs should be examined visually to ensure that they are functioning correctly.

If it is not possible to examine visually all luminaires and\or signs in this period further tests should be made after the battery has been fully recharged.

At the end of each test period the supply to the normal lighting should be restored and any indicator lamp or device checked to ensure that it is showing that the normal supply has been restored. The charging arrangement s should be checked for proper functioning.

c) Each engine-driven generating plant should be started up by a simulation of a failure of the supply to the normal lighting and allowed to energize the emergency lighting system for a continuous period of at least 1h.

During this time all luminaires and/or signs should be examined visually to ensure that they are functioning correctly.

At the end of the test period the system should be restored to normal operation and the charging arrangements for the engine-starting battery checked for proper functioning. The fuel tanks should be left filled and the oil and coolant levels topped up as necessary.

Frequent starting of the plant followed by a few minutes on load is not recommended.

d) The engine of each engine-driven generating plant with back-up batteries should be prevented from starting.

The emergency lighting system should then be energized solely from the back-up battery by simulation of a failure of the supply to the normal lighting for a period sufficient only to ensure that the change-over from normal supply to battery is functioning properly. After this check the starting system of the engine should be returned to normal operation and the engine allowed to start up in the normal way to energize the emergency lighting system for a continuous period of at least 1h.

During these periods all luminaires and/or signs should be examined visually to ensure that they are functioning correctly.

At the end of the test period the system should be restored to normal operation and the charging arrangements for the back-up and the engine-starting batteries checked for proper functioning. The fuel tanks should be left filled and the oil and coolant levels topped up as necessary.

Six-monthly

The monthly inspection should be carried out and the following tests made.

a) Each 3h self-contained luminaire and internally illuminated sign should be energized from its battery for a continuous period of 1h, by simulation of a failure of the supply to the normal lighting. If the luminaire is rated as having a duration of 1h, then the period of simulated failure should be 15 min.

During this period all luminaires and/or signs should be examined visually to ensure that they are functioning correctly.

At the end of this test period the supply to the normal lighting should be restored and any indicator lamp or device checked to ensure that it is showing that the normal supply has been restored.

b) Each 3h central battery system should be energized from its battery for a continuous period of 1h by simulation of a failure of the supply to the normal lighting. If the system is rated as having a duration of 1h then the period of simulated failure should be 15 min.

During this period all luminaires and/or signs should be examined visually to ensure that they are functioning correctly.

At the end of the test period the supply to the normal lighting should be restored and any indicator lamp or device checked to ensure that it is showing that normal supply has been restored. The charging arrangements should be checked for proper functioning.

c) Each engine-driven plant should be tested in accordance with the monthly schedule detailed above.

d) The engine of each engine-driven generating plant with back-up battery should be prevented from starting.

The emergency lighting system should then be energized solely from the back-up battery for a continuous period of 1h by simulation of failure of the supply to the normal lighting.

The starting system of the engine should then be restored to normal operation and the engine allowed to start up in the normal way to energize the emergency lighting system for a further continuous period of 1h.

During these periods all luminaires and/or signs should be examined visually to ensure that they are functioning correctly. At the end of the test period the system should be restored to normal operation and the charging arrangements for the back-up and engine-starting batteries checked for proper functioning. Any indicator lamp or device should then be checked to ensure that it is showing that the normal arrangements have been restored.

The fuel tanks should be left filled and the oil and the coolant levels topped up as necessary.

Three-yearly

The monthly inspection should be carried out and the following additional tests made.

a) Each emergency lighting installation should be tested and inspected to ascertain compliance with this code (see annex C).

b) Each self-contained luminaire and/or internally illuminated sign should be tested for its full duration.

At the end of the test period the supply to the normal lighting should be restored and any indicator lamp or device checked to ensure that it is showing that normal supply has been restored.

c) Each central battery system should be tested for its full duration.

At the end of the test period the supply to the normal lighting should be restored and any indicator lamp or device checked to ensure that it is showing that normal supply has been restored. The charging arrangements should be checked for proper functioning.

d) Each generator back-up battery, where fitted, should be tested for its full duration.

At the end of the test period the system should be restored to normal operation and the charging arrangements for the back-up and engine-starting batteries checked for proper functioning. Any indicator lamp or device should then be checked to ensure that it is showing that normal arrangements have been restored.

The fuel tanks should be left filled and the oil and coolant levels topped up as necessary.

Subsequent annual test

For self-contained luminaires with sealed batteries, after the first three-yearly test should be carried out annually.

Schedule of monthly servicing to be carried out by or on behalf of the occupier/owner

NOTE 1 In addition to the instructions given below, the instructions issued by the manufacturers should be observed.

a) Check that defects recorded in the log book have been corrected.

b) Clean the exterior of luminaires and signs.

c) Check correct operation of luminaires and internally illuminated signs by operating the test facility.

d) Check correct operation of engine driven generator(s) and carry out the manufacturer's recommended maintenance.

e) Check fuel tanks, oil and coolant levels and top up as necessary.

f) Check level of electrolyte in batteries of central battery systems and generator starter batteries.

g) Check that all indicator lamps are functioning.

h) Record data in the log book.

Modifications to Emergency Lighting System

Date	Zone	Description of modification	Contractor	Recommission Date	Certificate in log book (tick)

Emergency Light No. / Area	Date	Action taken / Fault report	Action / Report by:

Emergency Light No. / Area	Date	Action taken / Fault report	Action / Report by:

Emergency Light No. / Area	Date	Action taken / Fault report	Action / Report by:

Emergency Light No. / Area	Date	Action taken / Fault report	Action / Report by:

Emergency Light No. / Area	Date	Action taken / Fault report	Action / Report by:

TAILORED FIRE & SECURITY

Tailored Fire & Security Ltd has many years of experience within the fire and security industry.

We operate both nationally and internationally.

Our experienced design team have been involved with design and development of some of the largest projects in the United Kingdom and Europe.

All products offered conform to ISO 9002 and have many world approvals.

TFS Ltd has the commitment, resources and experience needed when dealing with the protection of people and property.

Our approach is to tailor systems to our client's specific requirements and needs, we can impartially advise on products with unbiased opinion, whilst always finding the most effective solution.

Primary Business Address
8 Saville Street,
Bolton
Lancashire
BL2 1BY

Phone: 0870 429 9705
Fax: 0870 429 9706
Web: www.tfs-ltd.com