TAPESWITCH
Sensing Edges
MAINTENANCE MANUAL

1. PERIODIC CHECKING

1.1 GENERAL

The following sections describe the periodic checks to be performed on equipment fitted with Tapeswitch safety edge systems. If the equipment is fitted with additional safety devices the periodic checks prescribed by the manufacturer of these devices should be incorporated into the periodic checking regime described below.

If the equipment/safety device system fails any of the prescribed checks the equipment must be isolated and must not be used until the fault has been identified and rectified.

1.2 COMMISSIONING CHECKS

The commissioning checks should be carried out by persons who are competent and who have access to all the information supplied with the equipment and its safety devices. The results of the examination should be recorded and copies of this record should be kept by the user and the employer of the person performing the examination.

The person carrying out the examination should, as a minimum, perform the following checks:

(a) Check that the sensing edge is suitable for use in the application:

(i) Check that the level of safety integrity provided by the sensing edge is suitable for the level of risk presented by the equipment.

(iii) Check that the environment is suitable for the use of the sensing edge.

(b) Examine the equipment controls and connections to the sensing edge to ensure that the requirements described in this manual and in the equipment manual have been met.

(c) Check that the sensing edge is fixed in position.

(d) Check that there are no hazards remaining which are not protected by the sensing edge or by another safety device.

(e) Check that it is not possible for the dangerous parts of the equipment to be set in motion while the sensing edge is actuated.

(f) Check that actuation of the sensing edge during a dangerous phase of operation of the equipment results in the dangerous parts being arrested within the overtravel of the sensor.

(g) Check that, after the equipment has been stopped by the actuation of the sensing edge, it is not possible for the dangerous parts to be set in motion until the sensor has been cleared, the reset button has been operated and released, and the equipment start control has been re-operated.

(h) Check that the removal of power from the sensing edge prevents further operation of the equipment. It should not be possible for the dangerous parts of the equipment to set in motion until power has been restored, the reset button has been actuated and released, and the equipment start control has been actuated.

(i) Check that the sensing edge operates over the whole active area by pressing at regular intervals.

(j) Examine the stopping performance monitor (if fitted) to ensure that it is fitted and functioning correctly. Ensure that the means by which the stopping performance can be assessed by the operator is indicating correctly.

(k) Test the muting arrangements (if fitted). Ensure that the muting is only possible during non-dangerous operation and ensure that the safety level of the muting device is at or above that of the sensing edge but never below.

(l) Examine brakes and clutches (if fitted) as recommended.

NOTE: No stopping performance monitor or muting facilities are provided with the Tapeswitch sensing edge system and there is no means provided for the connection of such devices to the system. These devices may however have been provided elsewhere in the equipment control system.

1.3 SIX MONTHLY EXAMINATION

These examinations should be carried out by competent persons. The results should be recorded and a copy kept by the user.

The person should perform all the checks detailed in section 1.2. In addition the person should:

(a) Examine and test the machine primary control element(s) to ensure that they are functioning correctly and are not in need of maintenance or replacement.

(b) Inspect the equipment to ensure that there are no mechanical or structural aspects which could prevent the equipment from stopping or assuming an otherwise safe condition when called upon to do so.

(c) Check that no modifications have been made to the equipment control system, the safety edge system or the interface between them, which could adversely affect the system and that any suitable modifications have been correctly performed and suitably recorded.

1.4 DAILY/SETTING EXAMINATION

The following tests should be carried out daily by a designated person appointed by the equipment user. The results should be recorded and a copy should be kept on or near the equipment. Specific statutory requirements may apply to certain types of equipment.

The designated person should:

(a) Inspect the outer surface of the sensor(s) for mechanical damage to ensure that they have not been penetrated or chemically damaged.

(b) Check the operation of the sensor in several locations by operating the sensor with a thumb. Check at different locations each day such that the entire active area of the edge is periodically checked.

(c) Check that all electrical enclosures are closed and locked and that any keys have been removed for retention by a designated person.

(d) Check for signs of damage to cables and connections.

2. OPERATION, MAINTENANCE AND SERVICING

2.1 OPERATION

Operation of the system is straightforward. The only control device associated with the system is the reset button which must be actuated when the system is powered up and after each actuation of the sensor.

2.2 MAINTENANCE

The sensors themselves do not require any maintenance but regular cleaning of any surfaces which come into contact with the sensor will prolong its working life.

The control units also require no maintenance. Provided that the system has been installed in accordance with this manual and is operated within the performance parameters specified herein, the periodic examinations described in section 1 and the self-monitoring features of these devices are sufficient to ensure their continued safe operation.