

## To Be Performed at Every Power-up, Shift Change, and Machine Setup:

Daily checkout and checkouts after tooling and machine changes must be performed by a Designated Person (appointed and identified in writing by the employer). During continuous machine run periods, this checkout must be performed at regular intervals. A copy of the checkout results should be kept on or near the machine: see OSHA 1910.217(e)(1).

✓ **The Designated Person must:**

1)  **Verify that:**

- **Access to the guarded area is not possible** from any area not protected by the EZ-SCREEN Type 2. Hard guarding or supplemental presence-sensing devices must be installed, wherever needed, to prevent any person from reaching over, under or around the defined area or entering into the hazard area.
- **All supplemental guarding devices and hard guarding are in place** and operating properly.

2)  **Verify that the minimum separation distance** from the closest hazard point of the guarded machine to the defined area is not less than the separation distance calculated in Section 3.1.1 of the instruction manual and recorded here: \_\_\_\_\_.

3)  **Verify that:**

- **It is not possible for a person to stand inside the guarded (dangerous) area, undetected by the EZ-SCREEN Type 2 or other supplemental guarding (as described in ANSI/RIA R15.06, or other appropriate standards).**

4)  **Verify that:**

- **The Reset switch is mounted outside the guarded area**, out of reach of anyone inside the guarded area and
- **The means of preventing inadvertent use (e.g., rings or guards) is in place.**

5)  **Using the supplied test piece (STP-14), test the effectiveness of the EZ-SCREEN Type 2 with power ON, using the trip test.**

**5a) Trip Test**

**With power ON, verify that the EZ-SCREEN Type 2 is in RUN mode;** receiver status indicators should be as follows:

|                           |           |
|---------------------------|-----------|
| Both Alignment indicators | ON Yellow |
| Status Blocked indicator  | OFF       |
| Status Clear indicator    | ON Green  |

**A manual reset may be required for Latch Output models:**

|                           |                 |
|---------------------------|-----------------|
| Both Alignment indicators | Flashing Yellow |
| Status Blocked indicator  | ON Red          |
| Status Clear indicator    | OFF             |

Open the normally closed Reset switch for 1/4 second (minimum) then close it.

**5b) With the guarded machine at rest, pass the test piece downward through the defined area in three paths:** near the receiver, near the emitter, and midway between them (Figure 1).

- *If the emitter and receiver are far apart, a second person may be needed to monitor the indicators while the test piece is used near the emitter or in the midway position.*
- *If corner mirrors are used in the application, the beams must be tested in three places on each leg of the beam path (between emitter and mirror, and also between mirror and receiver, Figure 2).*

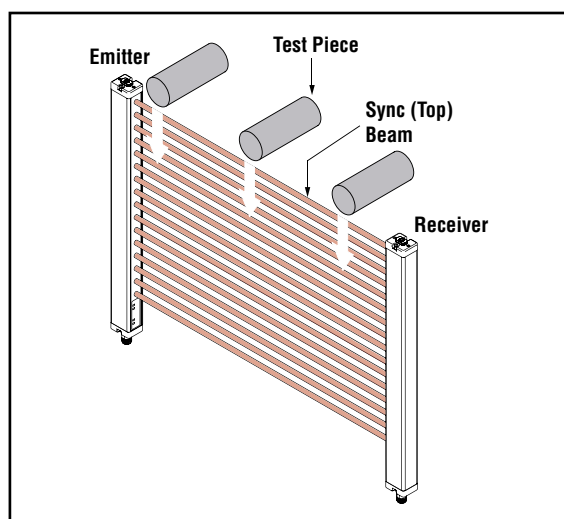


Figure 1. EZ-SCREEN Type 2 trip test

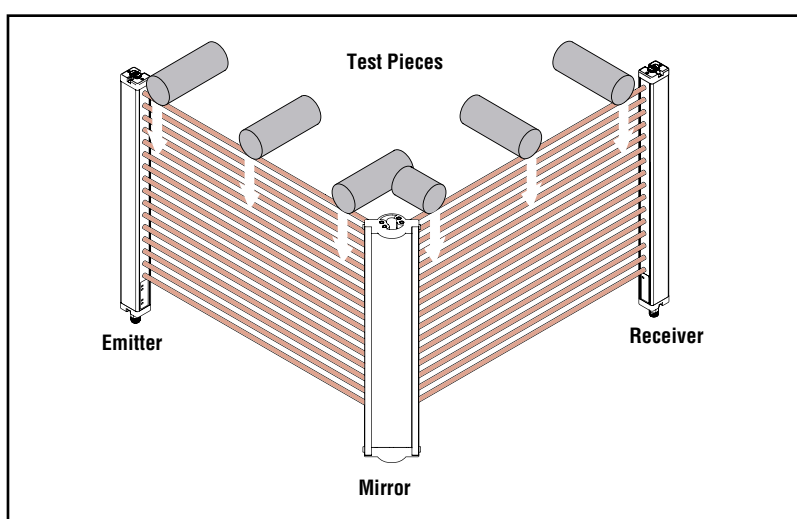


Figure 2. EZ-SCREEN Type 2 trip test for corner mirror applications

## 5c) Verify whenever the test piece is interrupting the defined area:

- **Trip Output Operation:** The Status Blocked indicator must turn ON Red and remain ON for as long as the test piece remains in the defined area (and the Status Clear indicator OFF during the same time). If not, the installation has failed the trip test. When the test piece is removed from the defined area, the Status Clear indicator must turn ON Green and the Status Blocked indicator must go OFF.
- **Latch Output Operation:** The Status Blocked indicator must turn ON Red and remain ON for as long as the test piece remains in the defined area (and the Status Clear indicator OFF during the same time). Both Yellow indicators must remain ON steady, unless the top or bottom beam is blocked. If the top (sync) beam is blocked, both Alignment indicators will go OFF.

If the Yellow Alignment indicators begin to flash at any time while the test piece is interrupting the defined area, the installation has failed the trip test. Check for correct sensor orientation and reflective surfaces. Do not continue until the situation is corrected.

In Latch Output Operation, after the test piece is removed from the defined area, the Status Blocked indicator will remain ON until a manual reset is performed (both Yellow Alignment indicators will be flashing).

## 5d) Verify when the test piece is removed from the defined area:

- **Trip Output Models:**  
Both Alignment indicators ON Yellow  
Status Clear indicator ON Green
- **Latch Output Models:**  
Status Blocked indicator ON Red  
Both Alignment indicators flashing Yellow  
Perform a manual reset.

### Eliminating Problems with Reflective Surfaces

- **If possible, relocate the emitter and/or receiver** to move the defined area away from the reflective surface(s), being careful to maintain adequate separation distance (see step 2).
- **Otherwise, if possible, paint, mask or roughen the surface** to reduce the reflectivity.
- **Where these are not possible (as with a shiny workpiece),** include a means of restricting the receiver's field of view or the emitter's spread of light in the sensor mounting.
- **Repeat the trip test** to verify that these changes have eliminated the problem reflection(s). If the workpiece is especially reflective and comes close to the defined area, perform the trip test with the workpiece in place.



### **WARNING . . . If Trip Test Indicates a Problem**

**If the EZ-SCREEN Type 2 does not respond properly to the trip test, do not attempt to use the System.** If this occurs, the System cannot be relied upon to stop dangerous machine motion when a person or object enters the defined area.

**Increased risk of harm could result.**



### **WARNING . . . Before Applying Power to the Machine**

**Verify that the guarded area is clear of personnel and unwanted materials (such as tools) before applying power to the guarded machine.**

**Failure to do so could result in an increased risk of harm.**

- Initiate machine motion of the guarded machine,** and while it is moving, insert the supplied test piece into the defined area. **Do not attempt to insert the test piece into the dangerous parts of the machine.**  
**Verify that, whenever the test piece is in the defined area:**
  - **The dangerous parts of the machine** come to a stop with no apparent delay.**Remove the test piece from the defined area, and verify that:**
  - **The machine** does not automatically restart, and
  - **Initiation devices** must be engaged to restart the machine.
- With the guarded machine at rest, insert the test piece into the defined area and verify:**
  - The guarded machine cannot be put into motion while the test piece is in the defined area.
- Check carefully for external signs of damage or changes** to the EZ-SCREEN Type 2, the guarded machine, and their electrical wiring. Any damage or changes found should be immediately reported to management.

**Do not continue operation until the entire checkout procedure is complete and all problems are corrected.**



### **WARNING . . . Do Not Use Machine Until System Is Working Properly**

If all of these checks cannot be verified, do not attempt to use the EZ-SCREEN Type 2/guarded machine until the defect or problem has been corrected (see Section 5 of the manual).

**Attempts to use the guarded machine under such conditions could result in an increased risk of harm.**