EZ-SCREEN Type 2 Safety Light Curtain Daily Checkout Procedure

Daily Checkout Procedure

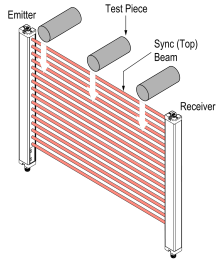
Banner Engineering highly recommends performing the System checkouts as described. However, a Qualified Person (or team) should evaluate these generic recommendations, considering their specific application, and determine the appropriate frequency of checkouts. This will generally be determined by a risk assessment, such as the one contained in ANSI B11.0. The result of the risk assessment will drive the frequency and content of the periodic checkout procedures and must be followed.

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).

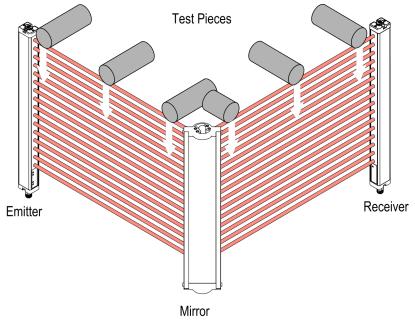
The Product Manual is p/n 122452.

		Perform at every power-up, shift change, and machine set up.
☐	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 Safety Distance (Minimum Distance) from the closest hazard point of the guarded machine to the defined area is not less than the distance calculated in the Product Manual. **Safety Distance (Minimum Distance): _____**
☐	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	If used, **verify** that: • The Reset switch, if used, is mounted outside the guarded area, out of reach of anyone inside the guarded area. • The means of preventing inadvertent use (for example, rings or guards) is in place.
☐	5	After Status Clear indicator is green and the Top and Bottom Status indicators are amber (trip models, flashing amber latch models), **test** the effectiveness of the EZ-SCREEN Type 2 with the power on, using the trip test and the supplied test piece (STP-14).
	5a	Trip Test: With the power on, **verify** that the EZ-SCREEN Type 2 is in Run mode; receiver status indicators should be as follows: Status clear indicator: Green Status blocked indicator: Off Both alignment indicators: Amber A manual reset may be required for Latch Output models: Both Alignment indicators: Flashing Amber Status blocked indicator: 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. • 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).

Trip test



Trip test for corner mirror applications



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122450
p/n: 122450 Rev. B

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		Perform at every power-up, shift change, and machine set up.
		WARNING: • **Trip test failure** • Using a system that has failed a trip test can result in serious bodily injury or death. If the trip test has failed, the system might not stop dangerous machine motion when a person or object enters the sensing field. • Do not attempt to use the system if the system does not respond properly to the trip test. **WARNING:** • **Clear the guarded area before applying power or resetting the system** • Failure to clear the guarded area before applying power could result in serious injury or death. • Verify that the guarded area is clear of personnel and any unwanted materials before applying power to the guarded machine or before resetting the system.
	5c	**Verify** that when 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 amber indicators must remain on, unless the top or bottom beam is blocked. If the top (sync) beam is blocked, both alignment indicators will go off. If the amber 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 amber alignment indicators will be flashing). **WARNING:** • **Do not use the system until the checkouts are verified** • Attempts to use the guarded/controlled machine before these checks are verified could result in serious injury or death. • If all these checks cannot be verified, do not attempt to use the safety system that includes the Banner Engineering Corp. device and the guarded/controlled machine until the defect or problem has been corrected.
	5d	**Verify** that when the test piece is removed from the defined area: • Trip Output models: Both Alignment indicators are amber and the Status Clear indicator is green • Latch Output models: Status Blocked indicator are red and both Alignment indicators are flashing amber. 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. • 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.
☐	6	**Initiate** machine motion of the guarded machine, and while it is moving, **insert** the optional test piece into the defined area. **Do not attempt to insert the test piece into the dangerous parts of the machine.** **Verify** that, when 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.
☐	7	With the guarded machine at rest, **insert** the test piece into the defined area and verify that the guarded machine cannot be put into motion while the test piece is in the defined area.
☐	8	**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. **IMPORTANT:** Do not continue operation until the entire checkout procedure is complete and all problems are corrected.

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