SERVICE BULLETIN

Document ID:

SB299W

Title:

Infeed Gripper Board Slip Sensor Upgrade

Affected machinery: BLADE II™ saw

Distribution: All customers with affected machinery

Applies to: All frames with an automated infeed rail. This includes the 16 ft., 20 ft., standard, and reverse configurations.

Sensitivity: Approved for customer use

CAUTION:
MiTek recommends printing this document in high resolution using color ink. Many of the graphics may be unclear and may create an unsafe condition if this recommendation is not followed.

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Revised By	
Rev. Approved By	
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Orig. Created By	P. Hopper
Orig. Approved By	R. Tucker

Purpose and Scope

This service bulletin instructs how to upgrade the Blade II infeed gripper with the new board slip detection sensor. The kit includes everything needed to mount the new sensor in its new location. The new sensor location has a detection based on vendor recommendation that is different from that of the existing sensor position.

Overview

Parts Included

The parts included in this kit are shown in Table 1. Please make sure all parts and supplies are present before starting the procedure.

Table 1: Parts in SB299WKIT

Quantity	Description	Part #
1	Mini Photoeye	516032
1	Sensor Mount Block	75043
1	Rear Mount Block	75044
1	Gripper Cover	75045
2	C'SCW,SKTHD,1/4-20X2	326169
2	C'SCW,SKTHD,1/4-20X1-3/4	326167
2	C'SCW,BHCS-METRIC, M3X0.5X14,91239A118	320000
1	4 pin - 3 pin adapter cable	509935
1	Service bulletin document	SB299W

If you have any questions, call MiTek Automation Support at 1-800-523-3380.

Supplies Needed

- Allen Keys:
  - 2mm
  - 3/16"
  - 5/32"
- Work light (optional)
- #1 Philips head screwdriver

Lockout/Tagout Instructions

Electrical Lockout/Tagout Procedure

The lockout/tagout instructions for the electrical systems will be referenced as necessary in this document. Service Bulletin instructions start on page 5.

	⚠ WARNING
	**ELECTROCUTION HAZARD.** **All electrical work must be performed by a qualified electrician.** **Verify that all power to the machine has been turned off and follow approved lockout/tagout safety procedures before performing any maintenance.** **If it is absolutely necessary to troubleshoot an energized machine, follow NFPA 70E for proper procedures and personal protective equipment.** **When the disconnect switch is off, there is still live power within the disconnect switch's enclosure. Always turn off the power at the building's power source to the equipment before opening this electrical enclosure.**

1. If applicable, close machine software and shut down the PC using the **Power** > **Shut down** method in Windows.
2. Engage an E-stop on the machine.
3. Turn the disconnect switch handle to the Off position. See Figure 1.
4. Attach a lock and tag that meet OSHA requirements for lockout/tagout to the electrical service entry panel.
5. Open the door to the enclosure to which you need access. Using a multimeter, verify that the power is off.

Figure 1: Disconnect Switch

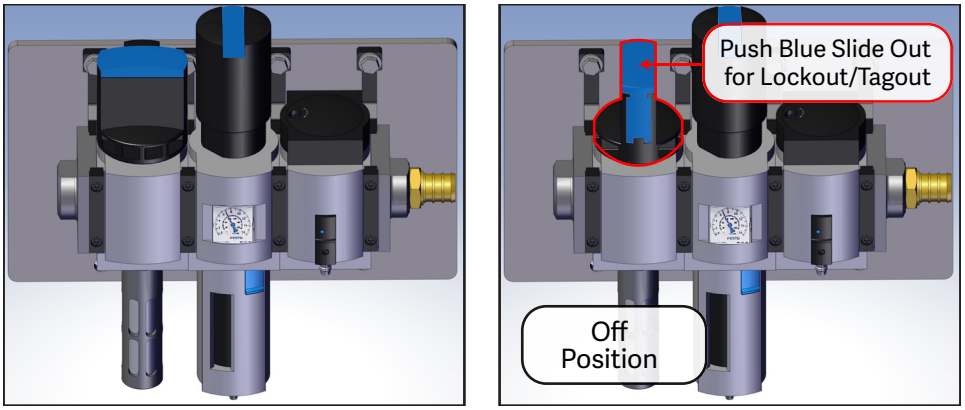
Pneumatic or Hydraulic System Lockout/Tagout Procedure

The lockout/tagout instructions for the pneumatic or hydraulic systems will be referenced as necessary in this service bulletin.

	⚠ WARNING
	**HIGH PRESSURE HAZARD.** **Bleed pneumatic lines before performing any maintenance on the system.** **Working on pressurized lines may cause injury.**

1. After lockout/tagout of the electrical power, turn off or close the system's air shut-off valve and attach a lock and tag. See Figure 2.

Figure 2: Pneumatic System Shut-Off Valve



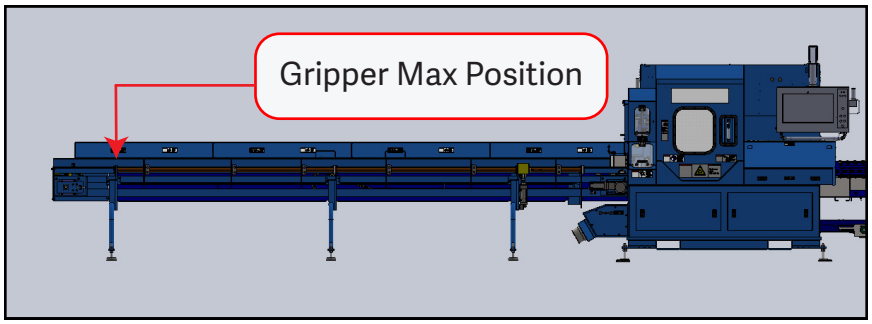
Procedure

Removing the Existing Sensor

	⚠ WARNING
	**MOVING PARTS CAN CRUSH AND CUT.** **Always verify that power to the machine has been turned off and follow approved lockout/tagout procedures.**

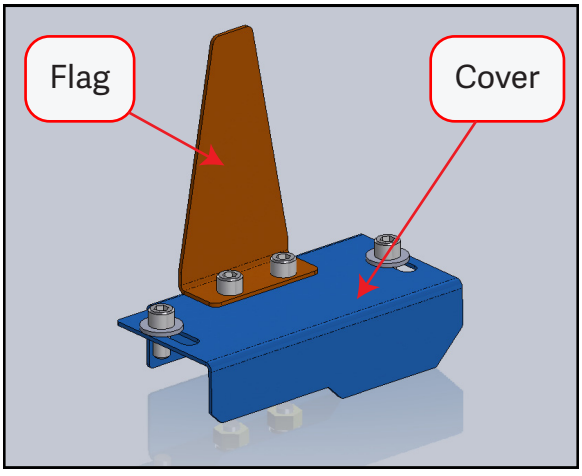
1. Set the infeed gripper to MAX position (Figure 3) to access the service door hatch.

Figure 3: Gripper Max Position



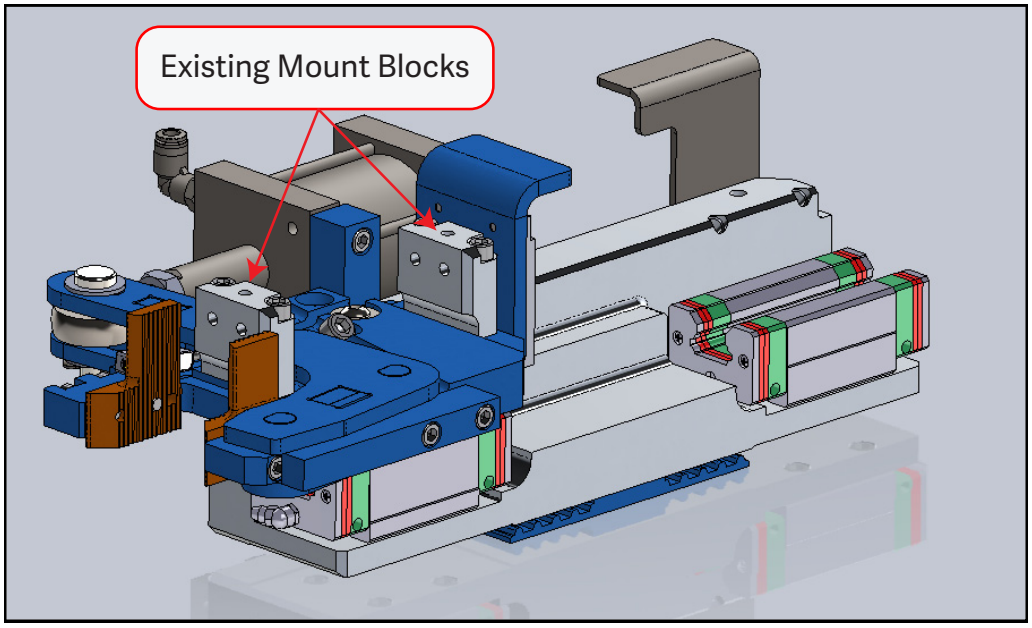
2. Lockout/tagout the electrical and pneumatic systems of the machine using the Lockout/Tagout Instructions on page 3.
3. With power locked out as previously described, remove the infeed paneling as needed for access to the wire connectors.
4. Remove the existing sensor cover as shown in Figure 4. Save the existing flag for reuse with the new cover

Figure 4: Sensor Cover and Flag



5. Remove both aluminum mounting blocks (Figure 5).

Figure 5: Existing Mounting Blocks

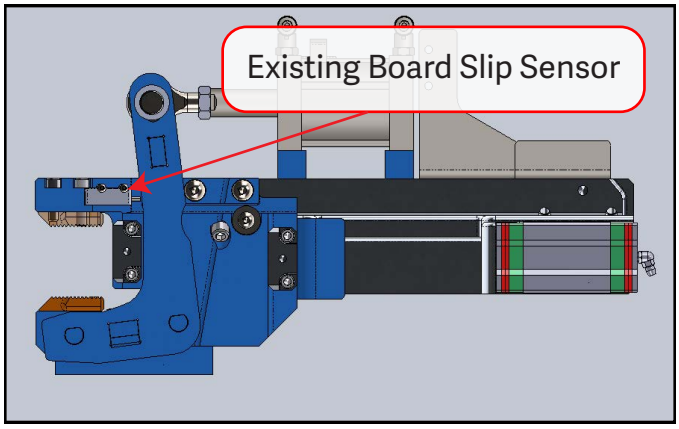


NOTICE

On rear load machines, it may be necessary to cut the existing sensor wire to remove it.

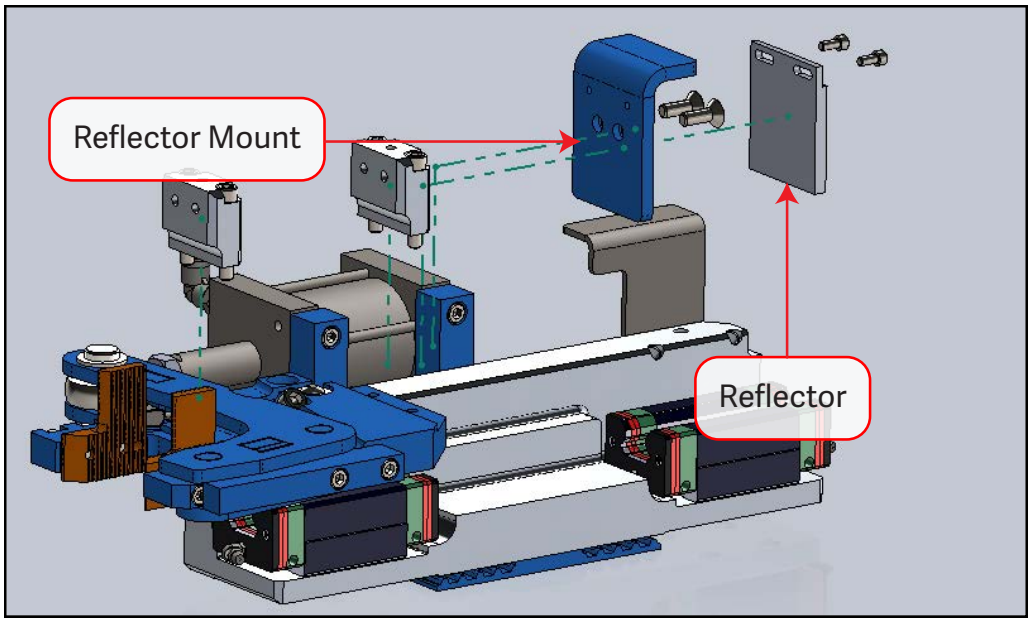
6. Remove the board slip sensor (Figure 6).

Figure 6: Existing Board Slip Sensor Location



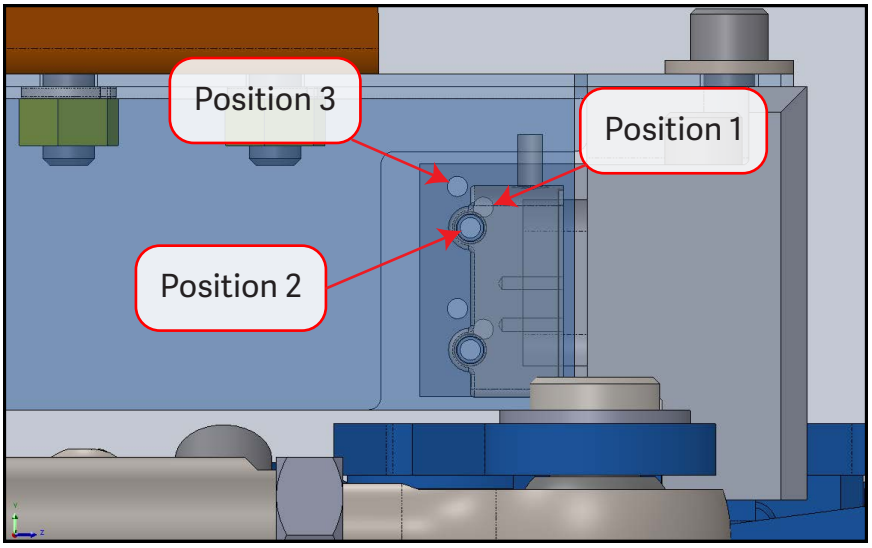
7. Remove the reflector and reflector mount (Figure 7). Save the existing hardware.

Figure 7: Reflector and Reflector Mount



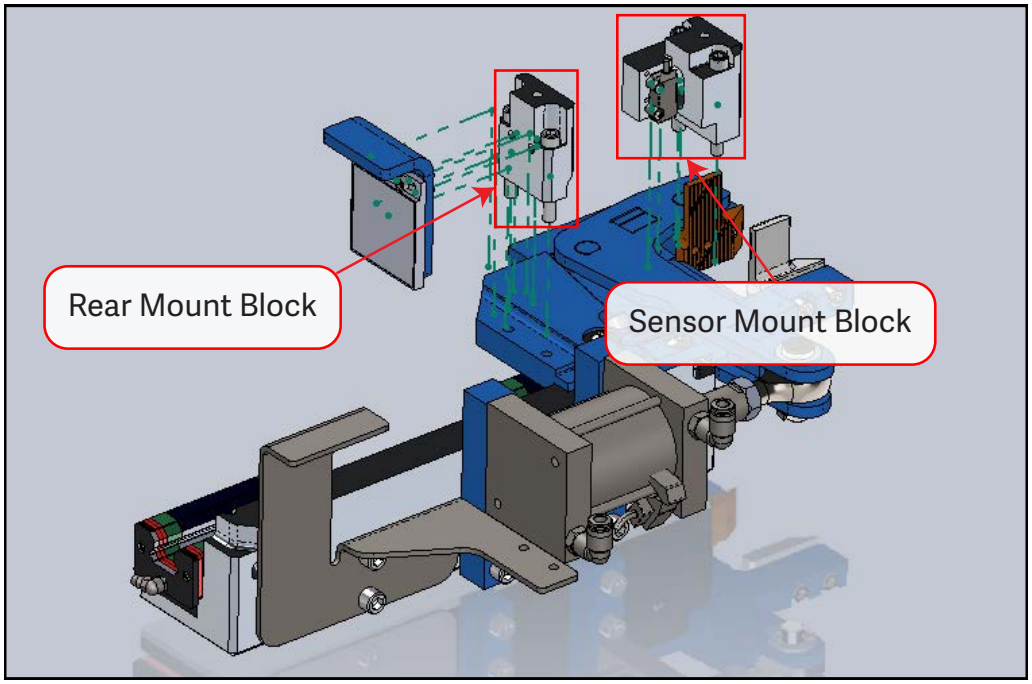
8. Mount the reflector and reflector mount removed in Step 7 onto the provided rear mount block.
9. Mount the provided sensor onto the sensor mount block in position #2 using the two provided M3X0.5X14 screws as shown in Figure 8. Note that the wire should be going upward.

Figure 8: Adjustable Sensor Position Options



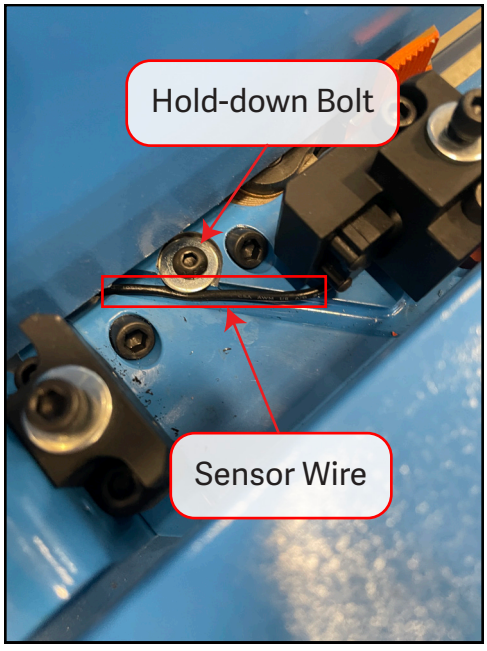
10. Mount the sensor mount block onto the gripper using the two 1/4-20x2 screws, then the rear mount block using the two 1/4-20x1-3/4 screws. See Figure 9.

Figure 9: New Blocks Mounting to Gripper



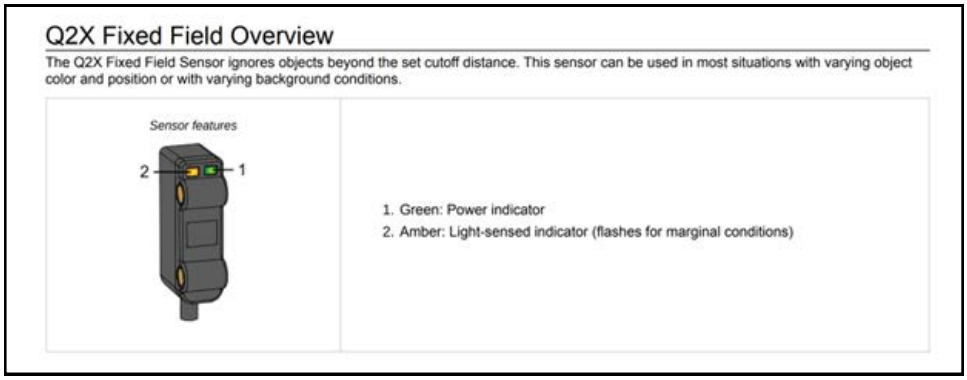
11. Secure the sensor wire using the provided hold-down bolt (Figure 10).

Figure 10: Sensor Wire Secured with Hold-down Bolt



12. Connect the new sensor to the existing sensor cable. On older frames, it may be necessary to use the provided 4-3 pin adapter.
13. Attach the existing flag to the new cover.
14. Affix the new cover with flag attached to the gripper board.
15. Remove lockout/tagout devices and test the sensor. A 2x4 flush to the mount block should trigger the sensor, causing the detection light (shown in Figure 11) to turn solid yellow. If the board is moved more than 1/16” away from the mount face, the sensor should not detect it. The gripper cover and mounting block may need to be removed to gain line of sight.
    - If during the test the sensor is not detecting the boards, move the sensor to position #1 as shown in Figure 8.
    - If the sensor is always detecting the boards, even during known slipping, then move it to position #3 as shown in Figure 8.

Figure 11: Indicator Light



END OF SERVICE BULLETIN