MiTek®

SERVICE BULLETIN

Document ID:

SB303

Title:

Replacing the Motor Starter Overload Assembly (GE® to ABB®)

Affected machinery: BLADE™ saw

Distribution: Customers upon order

Applies to: Customers with a faulty Contactor, Overload, Surge Suppressor, or Auxiliary Contact in their BLADE saw.

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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Part # and Rev.	SB303
Print Date	22 December 2025
Effectivity	All
Revision Date	
Revised By	
Rev. Approved By	
Orig. Release Date	15 December 2025
Orig. Created By	P. Hopper
Orig. Approved By	A. Kara

Purpose and Scope

This service bulletin instructs how to convert the overload assembly that controls the motor starter used in the BLADE saw from GE to ABB. The components of this overload assembly are the contactor, surge suppressor, overload, and auxiliary contact.

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 SB303KIT

Quantity	Description	Part #
3 ft.	Blue/White Jumper Wire	508006-10
1	Surge Suppressor	509252
1	Contactor	509339
1	Auxiliary Contact	509689
1	Overload	509879
1 Sheet	Write-In Labels	694060
1	Service bulletin document	SB303

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

Supplies Needed

- #2 Philips Head Screwdriver
- Voltmeter
- Wire Strippers
- Wire Snips

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 4.

	⚠ 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.**

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 machine's disconnect switch to the Off position. This is usually required to open the main electrical enclosure's door.
4. Shut the power to the machine off at the machine's power source, which is usually an electrical service entry panel on the facility wall. One example of a locked-out power source panel is shown in Figure 1.
5. Attach a lock and tag that meet OSHA requirements for lockout/tagout to the electrical service entry panel.
6. Open the door to the enclosure to which you need access. Use a multimeter to verify that the power is off.

Figure 1: Lockout/Tagout on the Power Source Panel

Procedure

Replacing GE Components with ABB Components

	⚠ 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. Lockout/tagout the electrical and pneumatic systems of the machine using the Lockout/Tagout Instructions on page 3.
2. With power locked out as previously described, open the top half of the saw's main electrical enclosure (Figure 3).

3. Locate the existing overload, contactor, side auxiliary contact, and front auxiliary contact (Figure 2).
   - Note: Your machine's specific configuration within the electrical enclosure may vary. See Figure 3 and Figure 4 for examples.

Figure 2: Existing Electrical Components for Motor Starter

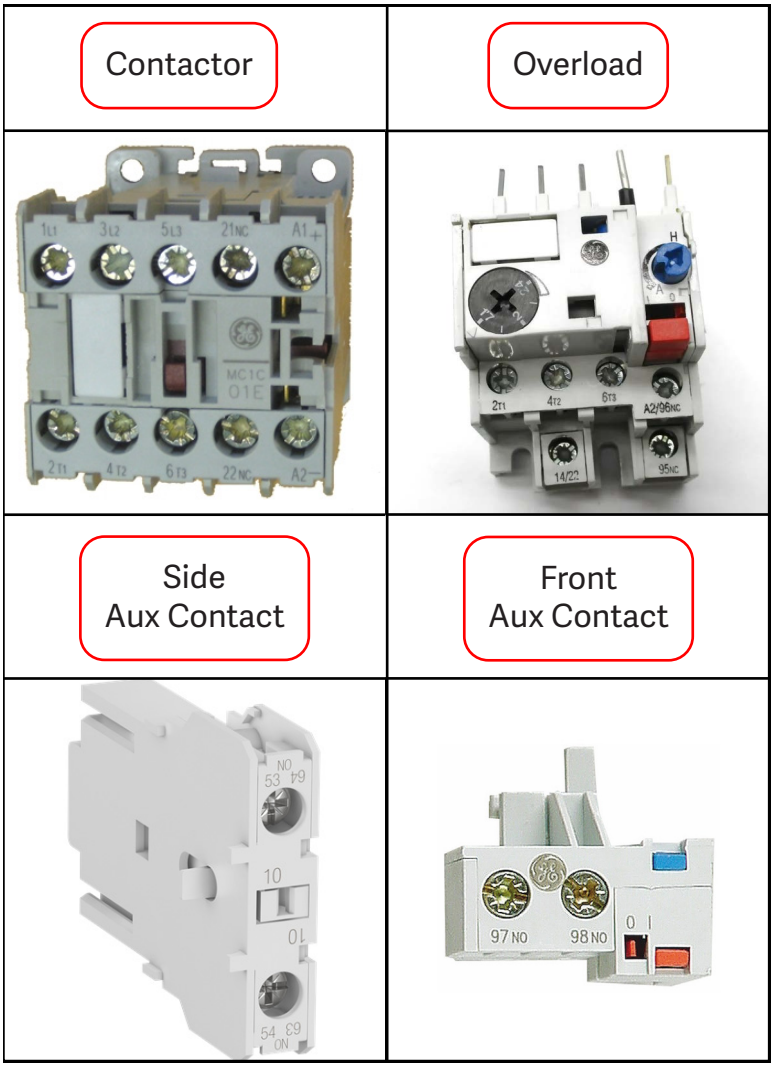


Figure 3: BLADE Main Electrical Enclosure Example 1

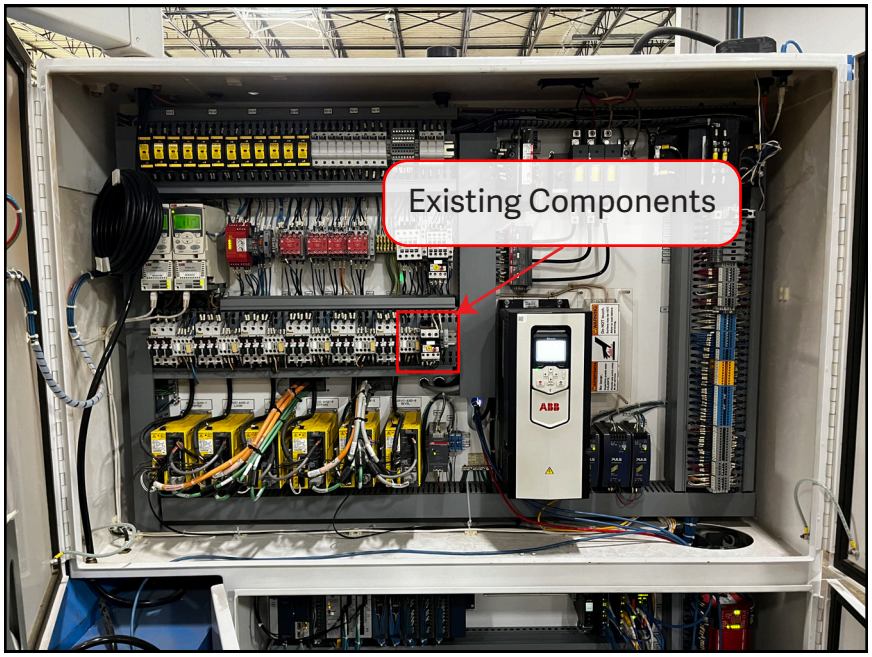


Figure 4: BLADE Main Electrical Enclosure Example 2

4. Label the wires connected to the front auxiliary contact on terminals 97 and 98, then the wires connected to the overload on terminals 14/22 and 95NC. Use Table 2 for reference.
   - Ensure each motor starter terminal block in the overload assembly has the correct labeling before being removed.

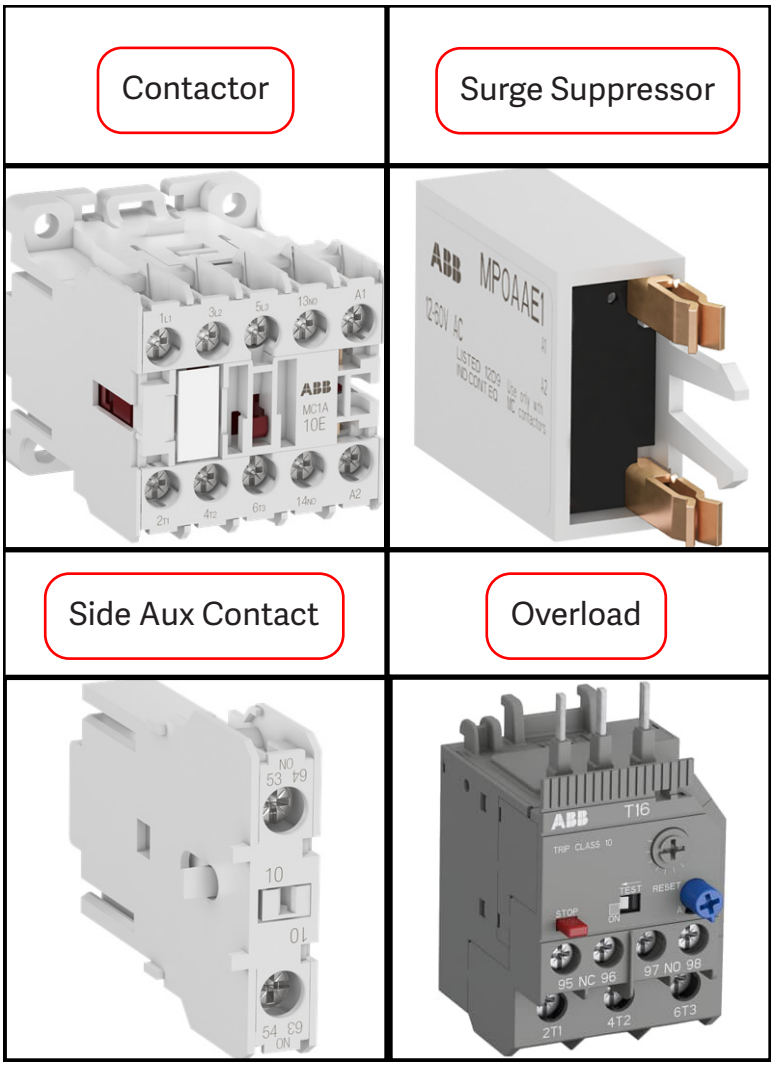
Table 2: Wiring Instructions

Motor Starter Terminal Blocks		Wire Labels		
Existing Blocks	**New Blocks**	**MS_2 (Waste Conveyor)**	**MS_3 (Incline Conveyor)**	**MS_4 (Outfeed Chain)**
1L1	1L1	6L1	6L1	6L1
3L2	3L2	6L2	6L2	6L2
5L3	5L3	6L3	6L3	6L3
21NC	21NC	527	528	529
A1+	A1+	Q17	Q18	Q19
NO23	NO23	50	50	50
24	24	IN:13	IN:14	IN:15
97	97	50	50	50
98	98	575	575	575
2T1	2T1	2T1	3T1	4T1
4T2	4T2	2T2	3T2	4T2
6T3	6T3	2T3	3T3	4T3
14/22	22NC	528	529	530
95NC	95	52	52	52

5. Remove the existing overload, contactor, surge suppressor, and auxiliary contactor by determinating each wire connected to them.

6. Mount the provided overload, contactor, surge suppressor, and auxiliary contactor and terminate the previously labeled wires using Table 2.

Figure 5: ABB Replacement Components



7. Connect Terminal 96 to Terminal A2- using the provided white and blue jumper wire.
8. Dial the new overload to the appropriate value as indicated in Table 3.

Table 3: New Overload Settings

MS_2 (Waste Conveyor)	MS_3 (Incline Conveyor)	MS_4 (Outfeed Chain)
1.9 FLA	4.2 FLA	1.9 FLA

9. Ensure all wires have been properly terminated by performing a torque check on each terminal screw.
10. Remove lockout/tagout devices and test the saw to ensure it functions without error.

Appendix

BLADE Saw Electrical Schematic Rev. D (For Reference Only)

Figure 6: Conveyors Power (Page 1)

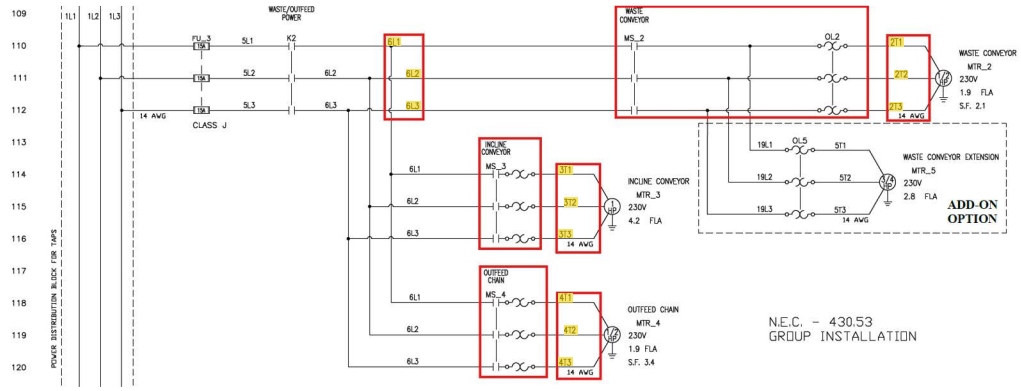


Figure 7: Conveyors in Safety Circuit (Page 9)

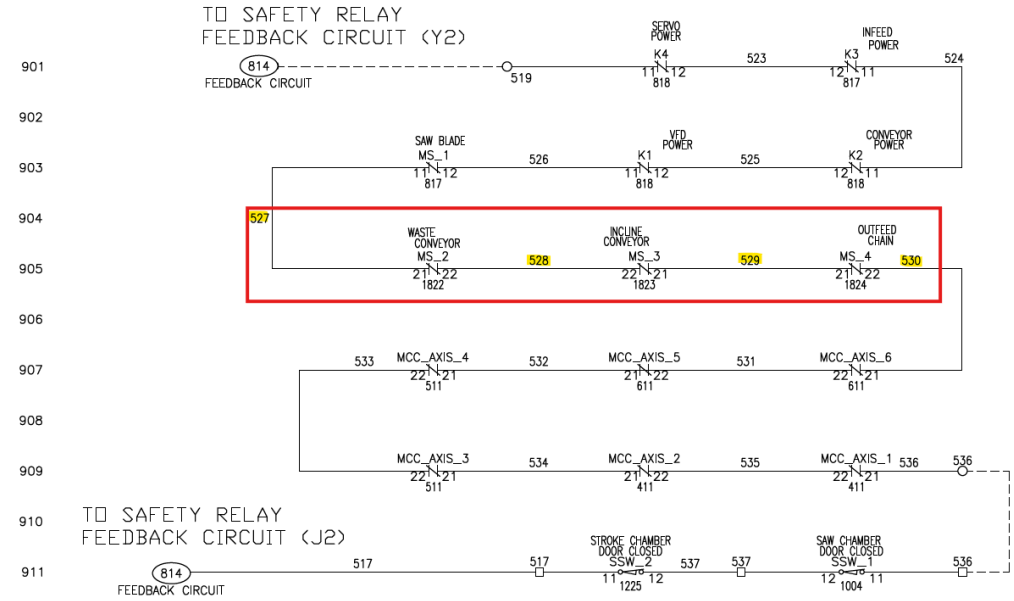


Figure 8: Conveyor PLC Input Wiring (Page 15)

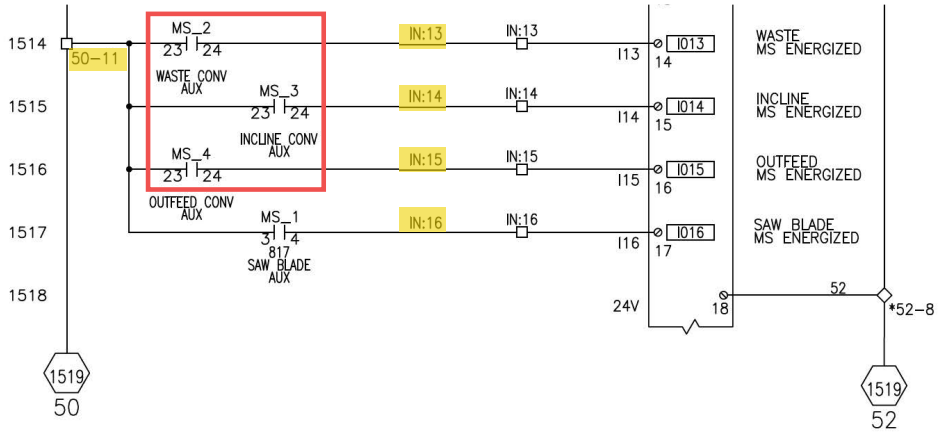


Figure 9: Conveyors PLC Output Wiring Start (Page 17)

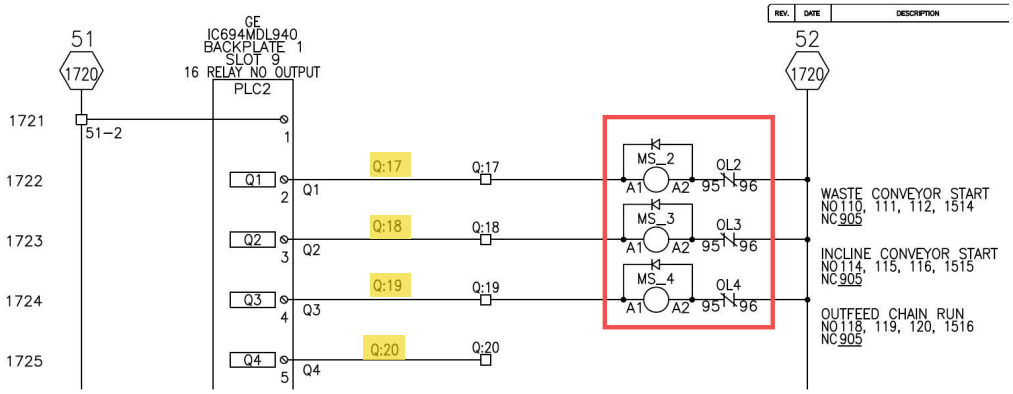
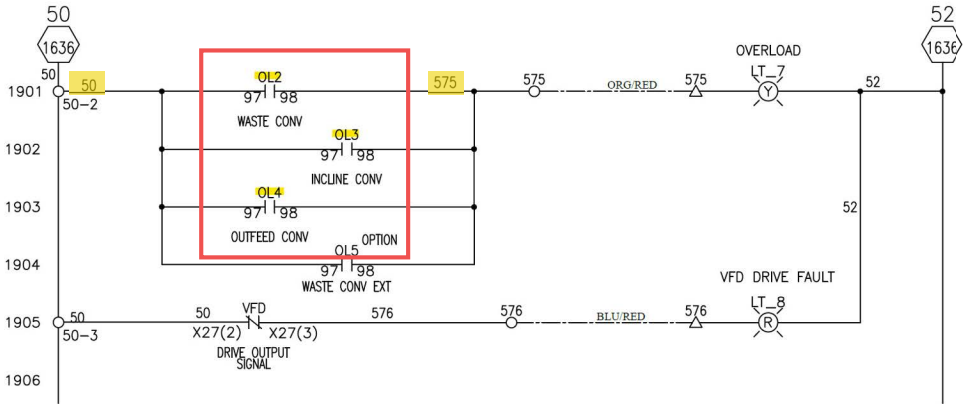


Figure 10: Conveyors PLC Output Wiring Exit (Page 19)



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