SERVICE BULLETIN
MAINTENANCE OF WAY EQUIPMENT

DATE: 11-2014   **BULLETIN NO:** 14-011

TITLE: Allen Bradley SLC CPU 500 Software Reset / Download Instructions

RATING:

[X]	**DIRECTIVE** (Action Is Required)	[ ] **ALERT** (Potential Problem)
[ ]	**INFORMATION** (Action Is Optional)	[ ] **PRODUCT IMPROVEMENT** (Enhance Product)

PRODUCT SERIES / MODEL: W96 Series E3 - 43 / 44 / 45 Spike Driver
W96 Spike Driver DTAM Conversion Kit
RMC306 Series C1 - 29 / 34 Anchor Boxer®
RMC306 Anchor Boxer® DTAM Conversion Kit

SERIAL NO: Spike Driver, Anchor Boxer® and Conversion Kits listed below:

Spike Driver: W96E3 - 43 / 44 3416560
Spike Driver: W96E3 - 45 3424839
Spike Driver: W96E3 Conversion Kit. 5027617
Spike Driver: W96E3 Conversion Kit. 5027619
Anchor Boxer®: RMC306C1 - 34 5001007
Anchor Boxer®: RMC306C1 - 29 DTAM Conversion Kit. 5027463
Anchor Boxer®: RMC306C1 - 34 DTAM Conversion Kit. 5027618

SUMMARY: Software often needs to be updated due to program improvements and to meet customer needs. W96 Spike Drivers and RMC306 Anchor Boxer's are unique in the fact that they utilize PLC logic and hardware to control machine functions. In time, software updates are needed to maintain peak performance with improving technology. Harsco Rail strides to provide the most effective method of software update transitions.

OPERATIONAL IMPACT: If proper reset and install procedures are not followed, there is a possibility of software reset and download failure. Harsco Rail recommends that you follow the steps in this Service Bulletin to safely reset and install updated software on Allen Bradley SLC 500 CPU's.

ACTION: If you have a machine with an Allen Bradley SLC 500 control system listed above, Harsco Rail recommends that you following the steps in this Service Bulletin to safely reset and install updated software on Allen Bradley SLC 500 CPU's.

CONTACT: Harsco Rail Service Department
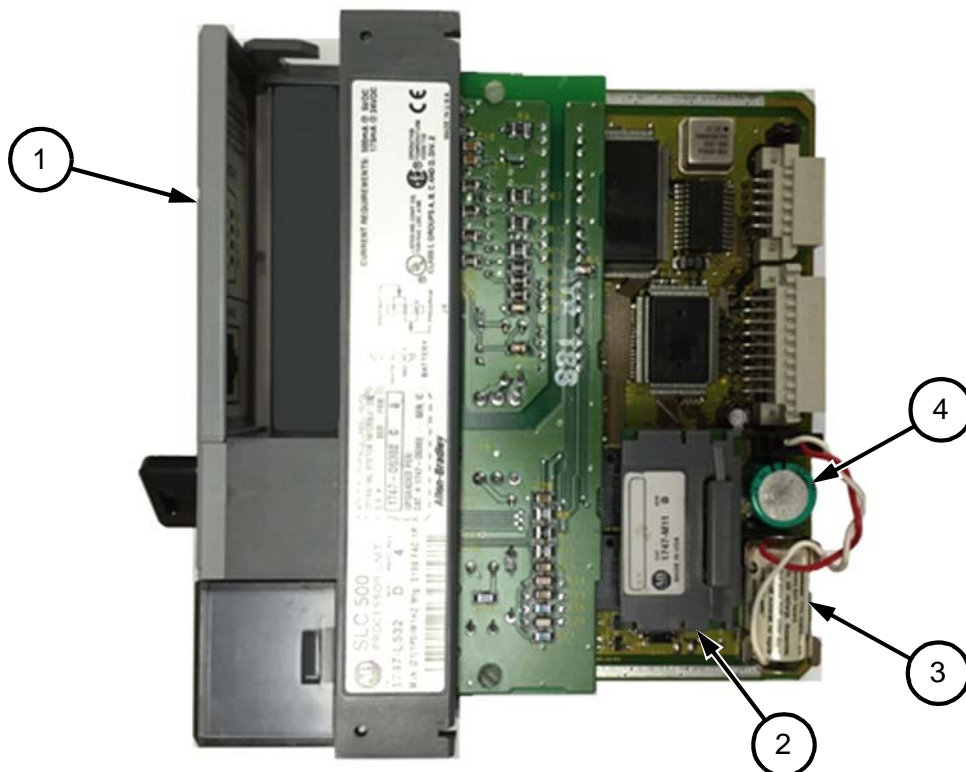Columbia, SC Facility
(803) 822-7546

SAFETY INFORMATION

⚠️ **WARNING**

■ **FOLLOW APPLICABLE RAILROAD LOCKOUT - TAGOUT PROCEDURES TO DISABLE ENERGY SOURCES WHEN PERFORMING MAINTENANCE, MAKING ADJUSTMENTS OR REPAIRS TO THE EQUIPMENT. FAILURE TO HEED THESE WARNINGS COULD RESULT IN SEVERE BODILY INJURY.**

Reset and Install Updated Software - See Figure 1

1. Rotate the Battery Master Disconnect Switch to the OFF position to turn the machine power off. Follow Lock-out / Tag-out procedures and apply Lock-out / Tag-out devices.

2. Remove CPU (Central Processing Unit) card (1) from the PLC (Programmable Logic Controller) rack.

3. Identify and remove the EEPROM chip (2) and the battery (3) from CPU card. Identify capacitor (4).
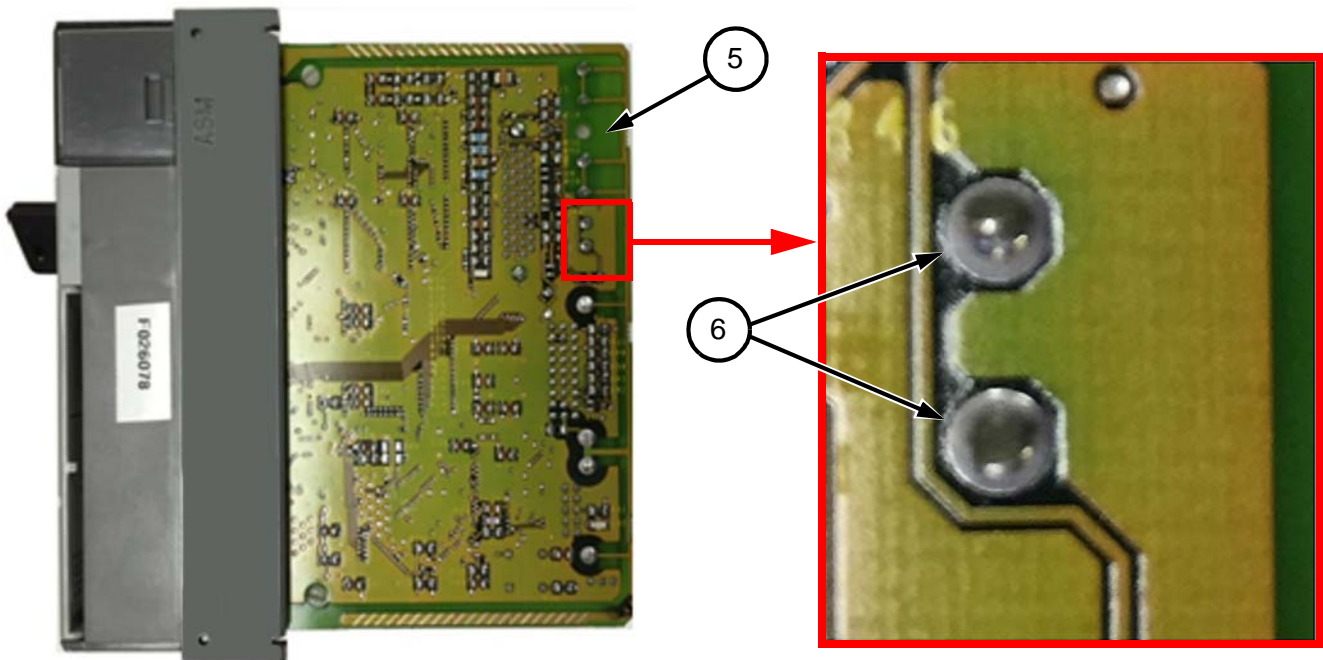
FIGURE 1
CPU CARD

Reset and Install Updated Software - See Figures 1 and 2

4.   On the back side of the CPU card (5), identify the two solder points (6) for the capacitor (4).

5.   Place a small screw driver or metallic device between the solder points (6) to short the capacitor. This process discharges the capacitor and clears the stored PLC program in the CPU.

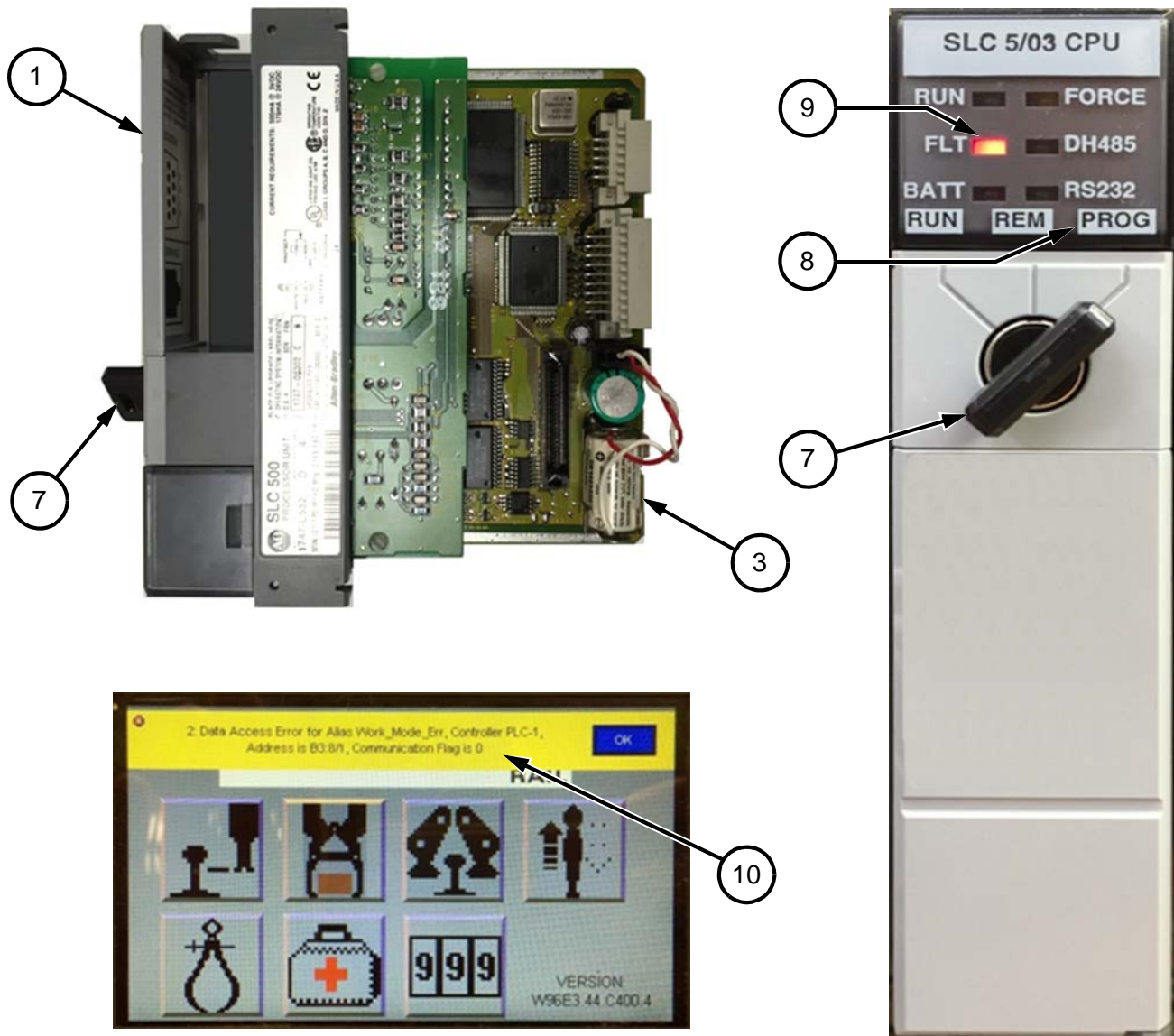*Note: It may be necessary to scrap the conformal coating off the board to make contact with the solder points.*

FIGURE 2
SOLDER POINTS DETAIL

Reset and Install Updated Software - See Figure 3

6. Plug the battery (3) back into the CPU card (1). Place the CPU card back into the PLC rack and turn the key switch (7) to the program "PROG" (8) position.

7. Remove the Lock-out / Tag-out devices. Rotate machine's Master Disconnect Switch to the ON position. The red fault "FLT" (9) light should be flashing on the CPU card. With no program in CPU, alerts will appear on panel view screen notifying (10) "Communication Flag 0" communication lost. This procedure will verify that the program has been removed from the CPU card.
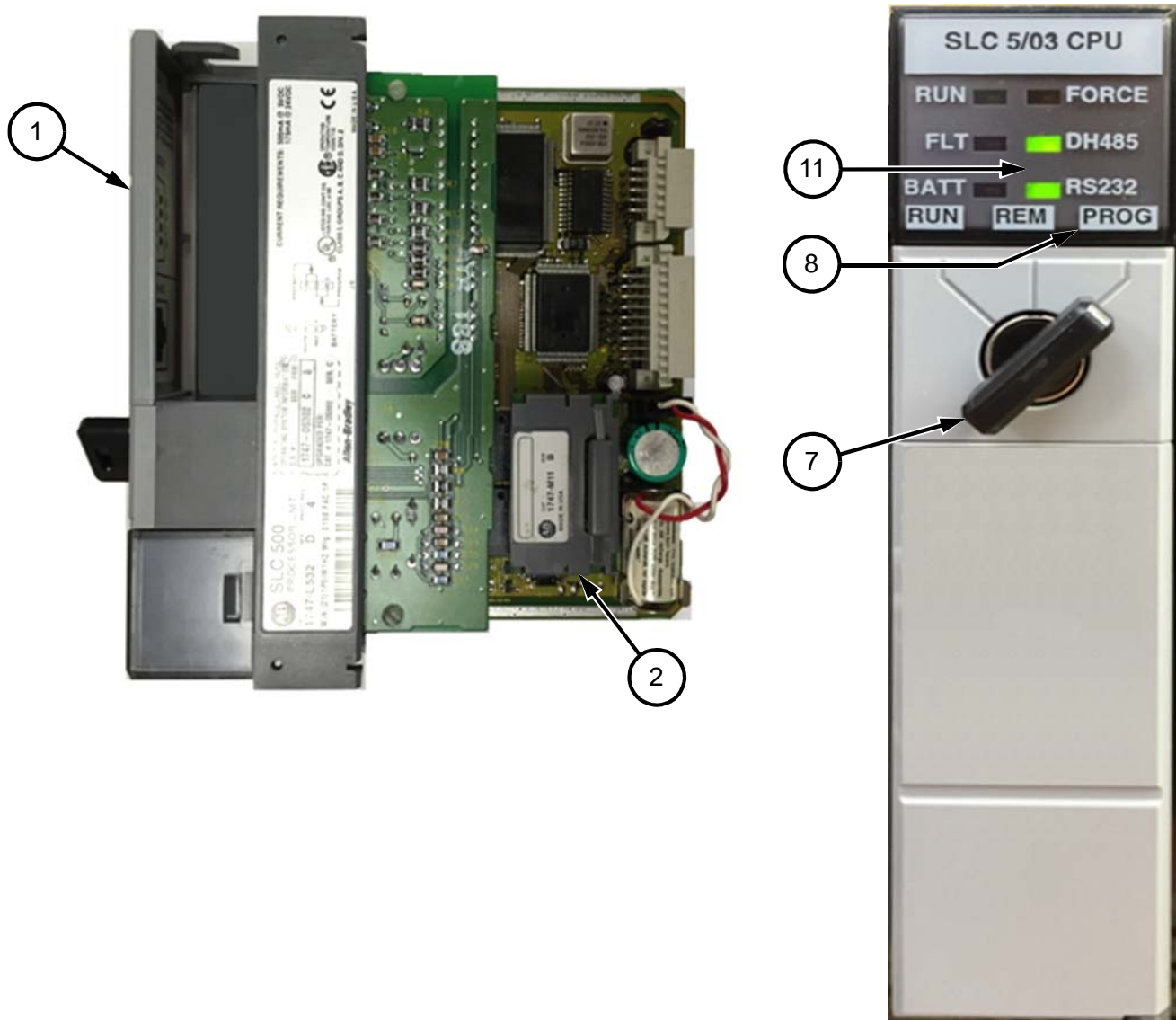
FIGURE 3
VERIFICATION PROCEDURES

Reset and Install Updated Software - See Figure 4

8.   Rotate the Battery Master Disconnect Switch to the OFF position to turn the machine power off. Follow Lock-out / Tag-out procedures and apply Lock-out / Tag-out devices.

9.   Remove the CPU card (1) from the PLC rack.

10.   Insert the EEPROM (2) with the updated software on to the CPU card (1). Place the CPU card back into the PLC rack and turn the key switch (7) to the Program "PROG" (8) position.

11.   Remove the Lock-out / Tag-out devices. Rotate machine's Master Disconnect Switch to the ON position.   Verify that DH485 light is ON and RS232 light is FLASHING green (11) on the CPU when switch (7) is in the "PROG" (8) position. This process verifies that a software program has been installed on to the CPU card.
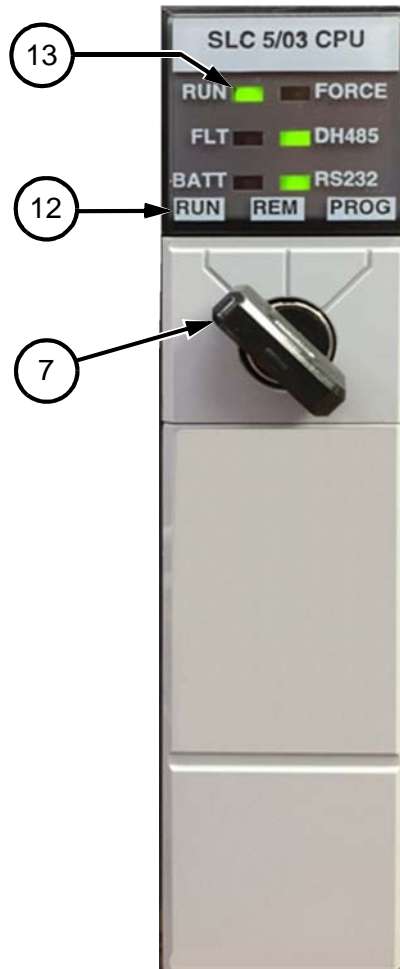
FIGURE 4
VERIFICATION PROCEDURES

Reset and Install Updated Software - See Figure 5

12. Verify all personnel are clear of machine.

13. Turn the key switch (7) to the "RUN" position (12). When the key switch is turned to the RUN position, the green "RUN" light (13) will turn ON and the software will become active. This will allow you to operate the machine. Be aware of any unexpected machine movement. Test and verify the machine functions as expected.

FIGURE 5
VERIFICATION PROCEDURES

PART NO	DESCRIPTION	QTY
200684	Memory Module 1	