Hardware Requirements for AccuLoad III Firmware Upgrade

Before attempting to upgrade your AccuLoad III to an ALX firmware package, ensure that the hardware is capable of handling the application by checking the revision levels of the EAAI board and the PIB board. Refer to the tables below for revision levels and capabilities.

EAAI Board

Board Revision Level	Number of RTD Modules Allowed
#1 - #4	2
#5 - #6	4
#7	6

PIB Board

Board Revision Level	Functionality
Board Revision #0 EPLD (U9) Revision #0	Can handle up to three single channel product meter pulse inputs and three pulse inputs for metered injectors and/or frequency densitometers; or Two dual pulse meter inputs with integrity (collision); or One dual pulse meter input with integrity (collision) and three pulse inputs for metered injectors and/or frequency densitometers
Board Revision #0 EPLD (U9) Revisions #1 and #2	Adds the capability of two dual pulse meter inputs and two inputs for metered injectors or frequency densitometers
Board Revision #1 (PIB II) EPLD (U9) Revision #0	Adds the capability of three dual pulse meter inputs
Board Revision #2 (PIB III) EPLD (U9) Revision #0	Adds the capability of a high speed prover output
Board Revision #2 (PIB III) EPLD (U9) Revision #1	Reverse Flow

PROM Installation Instructions

Before attempting any part of the following procedure, make certain that all programming data (including meter factors, totalizers, equations, and reports) currently contained in the program codes are recorded so that it can be re-entered into memory after new PROMs have been installed.

Note: *PROMs must be changed as sets for units using a KDC Board. Do not attempt to operate the AccuLoad III using PROMs from different revisions.*

When installing a KDC.net please note that the software revision (retrievable through diagnosis), U5 and U6 display proms, EAAI, BSE, and the AICB can all contain DIFFERENT revision levels. This is very common in firmware revisions 11.01 and above.

1. Read all instructions completely before attempting PROM Installation.
2. Power down the AccuLoad III.
3. Remove the AccuLoad III front cover screws.
4. Open the front cover.
5. Remove the seven barrier screws and barrier plate (Figure 1) from the KDC board located on the cover.
6. Remove the four barrier screws and the barrier plate (Figure 2) from the EAAI board located in the bottom of the housing.
7. Refer to Figure 3 for location of the PROMs on the KDC board and Figure 4 for the location of the PROM on the EAAI board and the BSE board (BSE board on ALIII-Q units only).
8. Using a PROM extracting tool, carefully pry the PROMs out of their sockets.
9. Install the new PROM in its proper location on the KDC board as shown by the PROM reference number (U5, U6, U34, U35, U39, and U40) on each PROM. (On the KDC.net there will be no U34, U40, U35, or U39 firmware proms). Ensure that all pins on the PROM are lined up with the socket receptacles, and that pin 1 of the PROM is lined up with pin 1 of its corresponding socket. There will be a notch in the socket to assure proper installation. Referring again to Figure 3, all PROMs (when properly installed) will have their notch facing left on the board where the arrows appear on the picture.
10. Install the new PROM in its proper location on the EAAI board as shown by the PROM reference number (U8) on the PROM. Ensure that all pins on the PROM are lined up with the socket receptacles, and that pin 1 of the PROM is lined up with pin 1 of its corresponding socket. There will be a notch in the socket to assure proper installation. Referring again to Figure 4, the PROM (when properly installed) will have its notch facing up on the board where the arrow appears on the picture.
11. Install the new PROM in its proper location on the BSE board (provided but not used with ALIII-S hardware) as shown by the PROM reference number (U5) on the PROM. Ensure that all pins on the PROM are lined up with the socket receptacles, and that pin 1 of the PROM is lined up with pin 1 of its corresponding socket. There will be a notch in the socket to assure proper installation. Referring again to Figure 4, the PROM (when properly installed) will have its notch facing left on the board where the arrow appears on the picture.
12. Pin 1 of the PROM is indicated as being to the left of the notch (facing away from you). Care should be taken to avoid bending the pins.
13. This completes the installation of the new PROMs. To assure correct system operation, it is now necessary to initialize the AccuLoad.
14. Replace the barrier plates and secure them into place with the screws removed earlier.
15. Close the front cover, taking care not to pinch any of the internal cables.
16. Power-up the AccuLoad III. The initialization test will be displayed followed by Ready Mode Display. If the AccuLoad III does not display the Ready Mode Display, power the unit down and check the PROM installation for bent pins and correct orientation. Disregard any alarms that occur on initial power-up.
17. Go to the Main Menu and Select Program Mode Menu.
18. The ENTER Passcode Screen will be displayed. Press “0” (X) will be displayed.
19. Press "ENTER". The Program Mode Menu will be displayed. Scroll down to the “Diagnostics Menu” and press "ENTER".
20. The Diagnostics Menu will be displayed. Scroll down to “Factory Intialize” selection and press "ENTER".

21. The following will be displayed:

Factory Initialize WARNING All run data and parameters Will be erased! Press ENTER to Continue or CLEAR to exit.

22. Press "ENTER". The following screen will be displayed:

Erasing Flash May take over 1 minute Please wait

Followed by:

Smith Meter Inc. AccuLoad III Initializing…

23. When the intialization process, has been completed the AccuLoad will display a DA: Mtr Program Err.

24. Enter the Program mode and reprogram the AccuLoad III.

25. Record program data for future reference.

26. Return old PROMs to:

    Guidant 1
    1602 Wagner Avenue
    Erie, PA 16510-1444
    Attention: Electronic Repair Center

27. Reference the shipping order and RMA number on the return package for expedient processing.

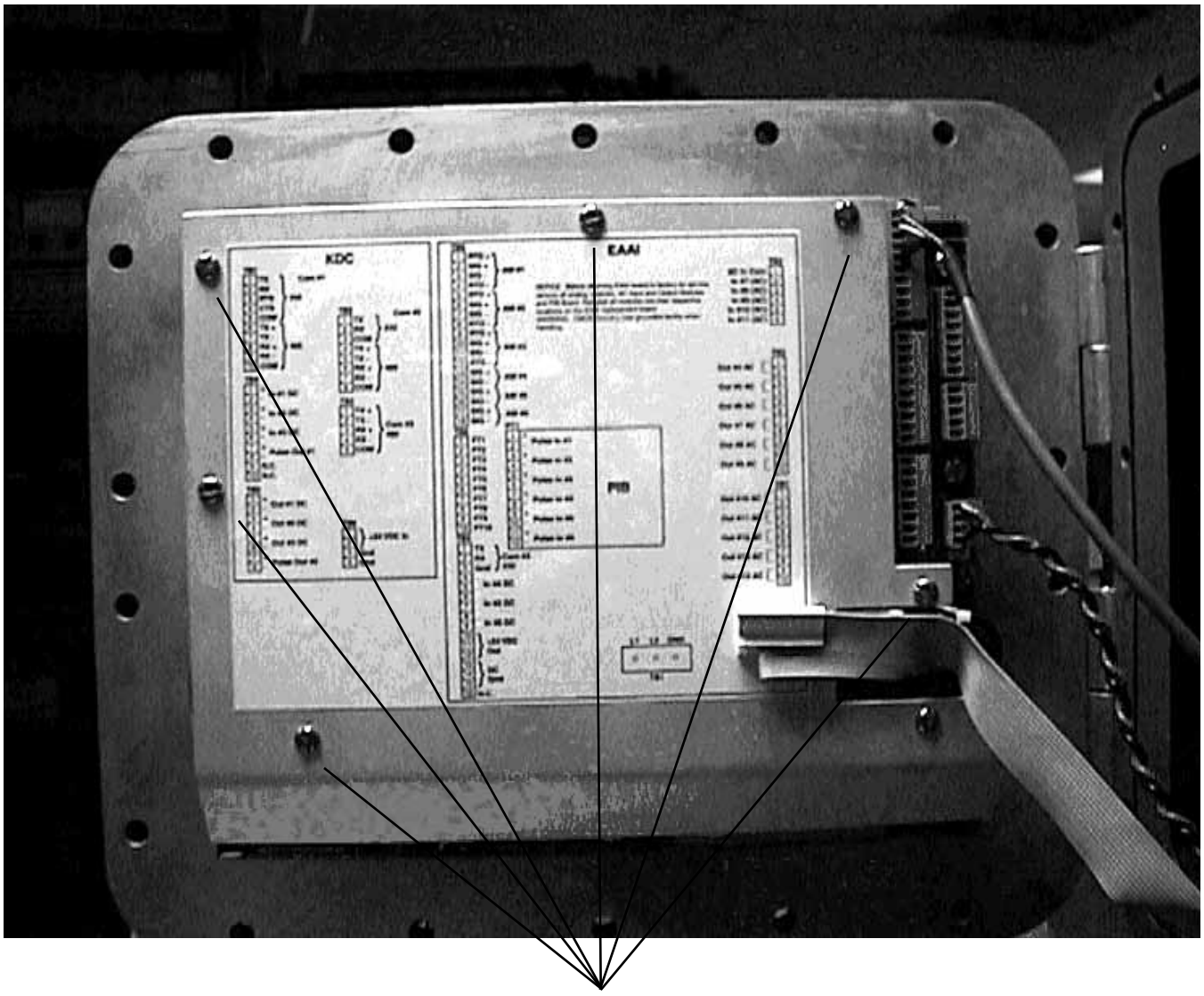

Figure 1. KDC Barrier Plate (ALIII-S hardware shown)

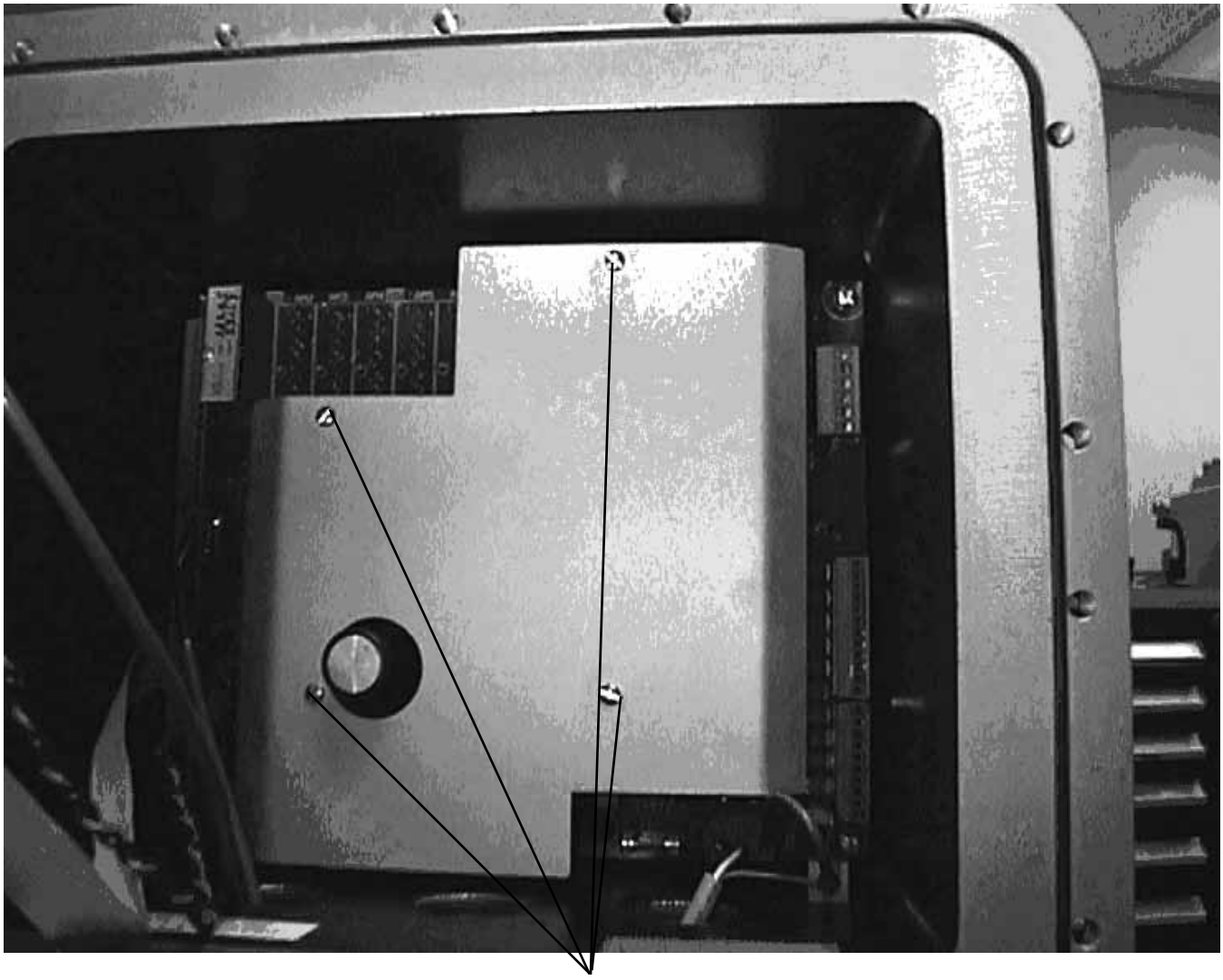

Figure 2. EAAI Barrier Plate (ALIII-S hardware shown)

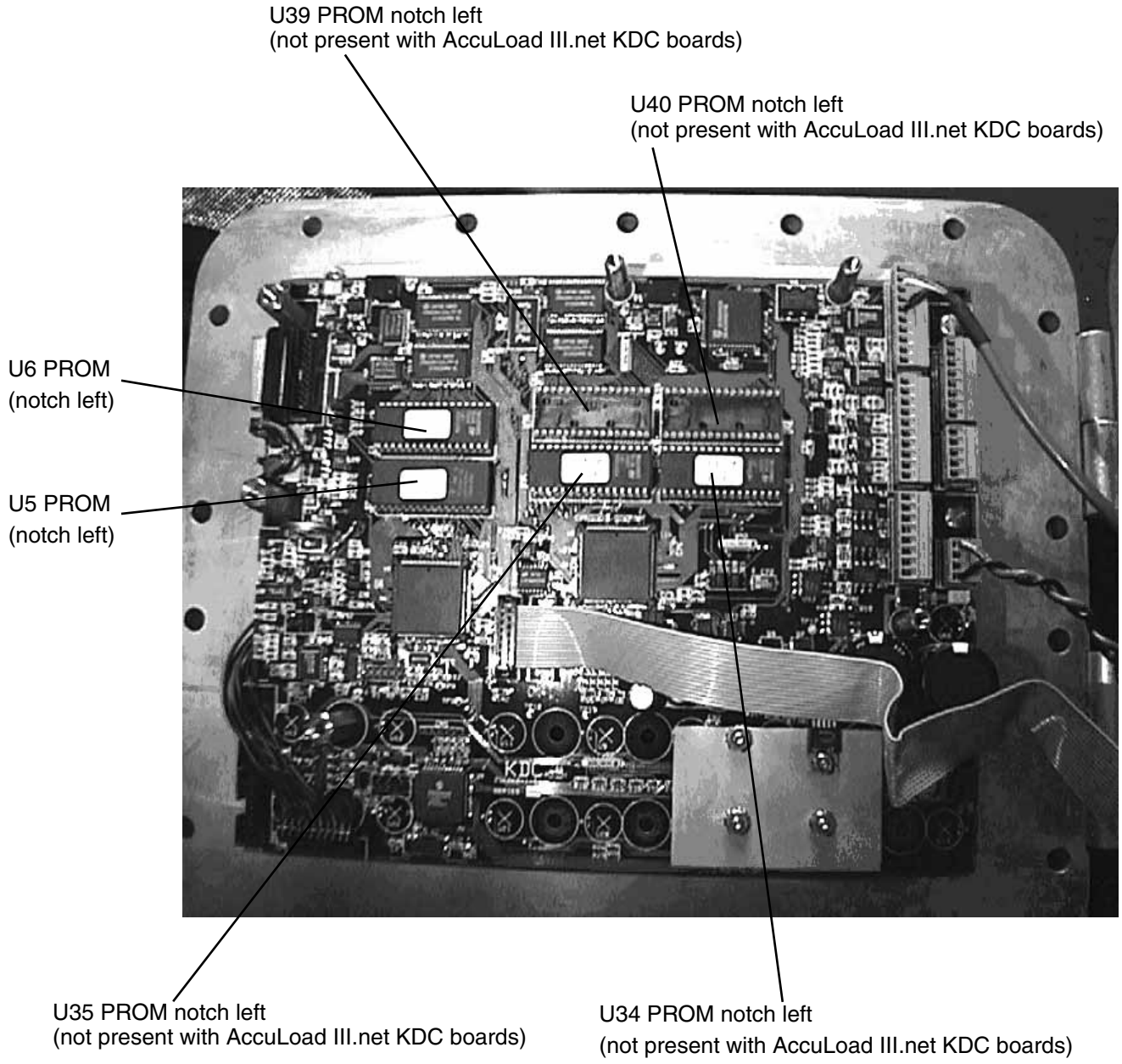

Figure 3. KDC PROMs

Note: *U39 and U40 PROMs apply to ALS1, ALD1, ALQ1, ALQ3, ALQ4, ALX1, ALX2, ALX3, ALX4, ALX5, and ALX6 firmware packages. Picture shown with ALIII-S hardware and ALS firmware.*

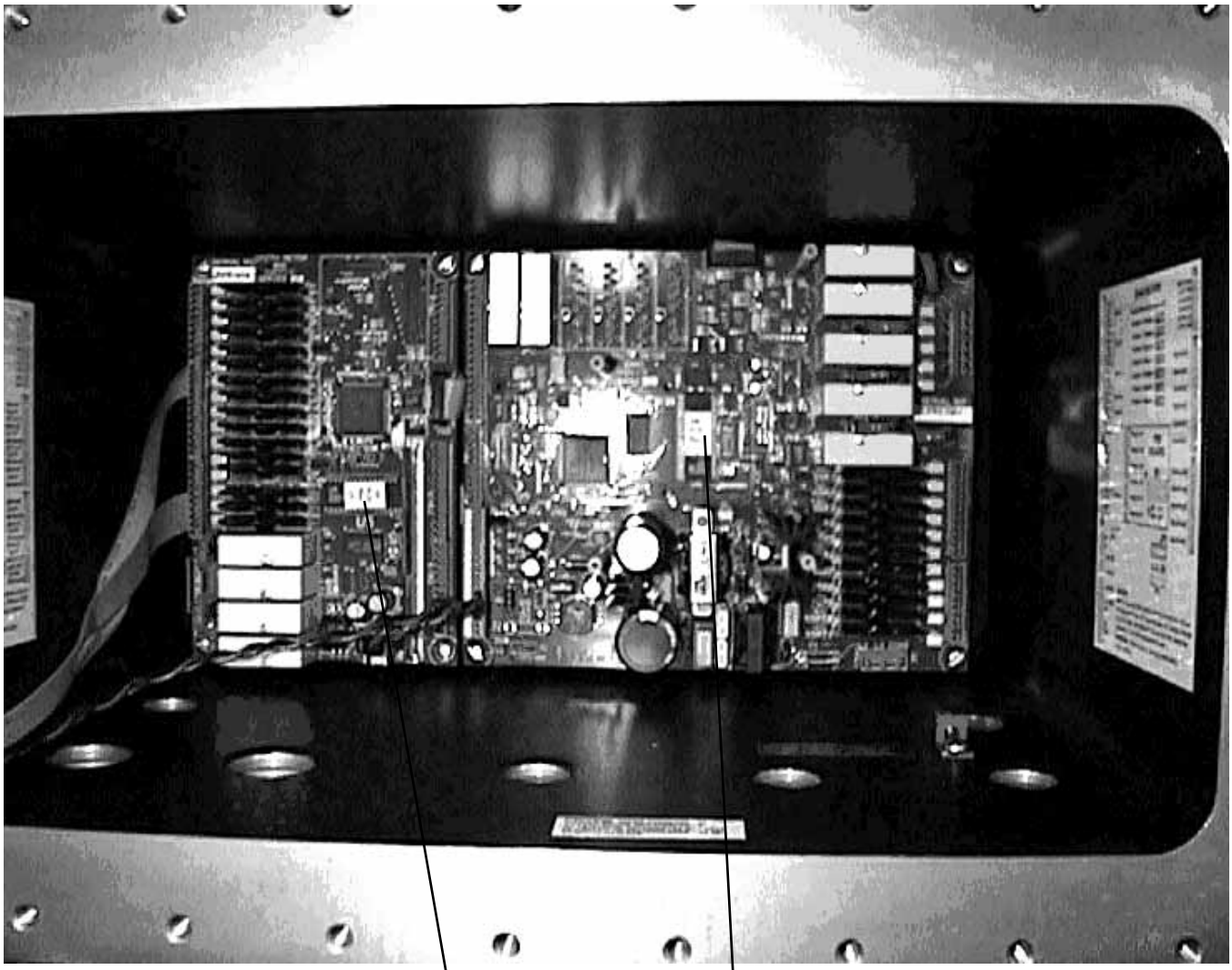

Figure 4. EAAI and BSE PROMs

Note: *BSE Board on ALIII-Q hardware only.*
Note: *BSE PROM (U5) supplied with all ALX replacement firmware kits. If a BSE board is not included as part of the AccuLoad III system, this PROM will not be used (all ALIII-S hardware).*
Note: *With AccuLoad III.net, prom revisions may not be the same.*

AccuLoad III-ALS

Specifications ..... Bulletin SS06030
Installation ..... Bulletin MN06108
Operator Reference ..... Bulletin MN06110
Communications ..... Bulletin MN06112L
Modbus Communications ..... Bulletin MN06111L

AccuLoad III-ALS1 and ALD1

Specifications ..... Bulletin SS06030
Installation ..... Bulletin MN06108
Operator Reference ..... Bulletin MN06118
Communications ..... Bulletin MN06119L
Modbus Communications ..... Bulletin MN06120L

AccuLoad III-Q

Specifications ..... Bulletin SS060364
Installation ..... Bulletin MN06125
Operator Reference ..... Bulletin MN06122
Communications ..... Bulletin MN06119L
Modbus Communications ..... Bulletin MN06120L

AccuLoad III-X

Specifications ..... Bulletin SS06036
Installation ..... Bulletin MN06135
Operator Reference ..... Bulletin MN06129
Communications ..... Bulletin MN06130L
Modbus Communications ..... Bulletin MN06131L

Technical Support

Contact Information:
Field Service Response Center
24/7 Technical Support/Schedule a Technician: 1-844-203-4014
System Installation Supervision, Start-Up, Commissioning Services, and Training Available

Revisions included in MN06113 Issue/Rev. 0.7 (7/10):
Page 1: Note moved to page 2; for units using a KDL board.
Page 7: BSE changed to EAAI on figure 4.

The specifications contained herein are subject to change without notice and any user of said specifications should verify from the manufacturer that the specifications are currently in effect. Otherwise, the manufacturer assumes no responsibility for the use of specifications which may have been changed and are no longer in effect.

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