iX™ Pay Secure Payment Module

Introduction

A few issues have been discovered during manufacturing of the iX Pay solution, both with the iX board and SPM keypad. We have been working aggressively to remedy the issues, and some of these remedies have already been implemented in production. It has also been discovered that not all returned units actually have failures and that improved troubleshooting and device handling will help improve the situation.

This service memo has been created in order to reinforce or bring light to specific steps and practices that may reduce the frequency of return visits for the iX Pay solution. Please ensure this memo is disseminated to all ASOs certified to work with the iX Pay solution.

The main focus areas of this memo are iX board ground, a review and further explanation of *Maintenance Mode*, a new Service View utility, a suspected issue with iX board memory DIMMs, a note regarding startup timers, and the upcoming keypad protection bracket.

Proper iX Board Grounding

When installing or servicing iX boards, it is important to ensure that any grounding cables or straps connected to the iX boards do not come in contact with any chips, resistors, or other components on those boards. Improper grounding can lead to erratic operation or board failure; be mindful of this also when installing SPM retrofit kits where several chassis ground connections are made in the electronic head.

Maintenance Mode Explained

Maintenance mode serves two purposes: It allows the technician to change the encryption being used without having to change out the keypad, and it temporarily disables the device removal sensor allowing for the removal of the keypad from the dispenser without causing the security keys to be erased. This mode must be used if there is a need to remove a working SPM, or a need to remove the SPM panel. If the Maintenance mode is not used in these cases, the SPM security keys will be erased and the keypad will be inoperative.

It is not necessary to use the *Maintenance mode* when replacing the iX board or when replacing the SPM battery. However, the keys will be erased if the battery is disconnected while power is off. **When replacing the SPM battery, dispenser power must remain ON and the USB cable must be connected.**

Swapping SPM Keypads

Due to the secure nature of the iX Pay solution, moving a working SPM keypad from one fueling point to another should not be used as a troubleshooting step. **If removing an activated SPM from the dispenser for any reason, it must first be placed in *Maintenance Mode*.**

Maintenance Mode Timer Limit

It is important to note that **there is a 30 day timer** for *Maintenance mode* on the iX Pay Secure Payment Module (SPM). If not returned to *Operation Mode* before expiration of the 30 day timer, the keypad will erase the SPM security keys and the keypad will be inoperative. Returning the keypad to *Operation mode* resets this timer and reactivates the device removal sensor. It is important to ensure the keypad is installed in the dispenser before returning the keypad to *Operation mode*.

Service View Utility

With the introduction of the iX Pay SPM firmware, the complexity in troubleshooting the dispenser has increased. Technicians must take extra precaution and care to prevent unnecessary or unintended breaching of the security system. Once the system is breached, the only way to obtain information from the SPM currently is through a console based utility that is not very user friendly.

The SPM Service View Utility is developed to allow service to directly connect to the SPM for basic information retrieval. It is a stand alone graphical tool to extract information from the SPM without the need to power up the dispenser.

This utility only captures very basic information, which can be used during troubleshooting. It does not replace the capture of log files during keypad replacement. It is still important to capture and send in log files when returning an SPM keypad for replacement.

Service View is available on the ASONet in the File Downloads > iX section.

Suspected Bad DIMM Identification

Some of the issues with screen blanking and black lines on the displays of iX board dispensers are believed to be tied to a batch of bad RAM DIMMs on the iX board. When you see one of these issues in the field while working on these chronic sites, look at the RAM stick on the board.

The suspected bad RAM has the following component chips. Note the logo on the black component chip and where it shows "VPR" in the top line of text. Refer to Figure 1, below.


Figure 1: Suspected Defective Memory DIMM, with component chip and letter code VPR highlighted

Startup Timing Reminders

Please be aware that certain iX applications (particularly IDPOS) will occasionally display blank screens during the startup process. When troubleshooting a blank display issue, please let the CAT attempt to load for approximately 3 minutes before proceeding with additional troubleshooting.

Keypad Protection Bracket

To protect the secure keypad from environmental issues, a keypad protection bracket may be included in keypad replacement kits. In order to improve reliability of the device, please follow the installation steps document included with the bracket. Refer to Figure 2, below.
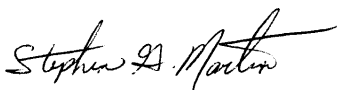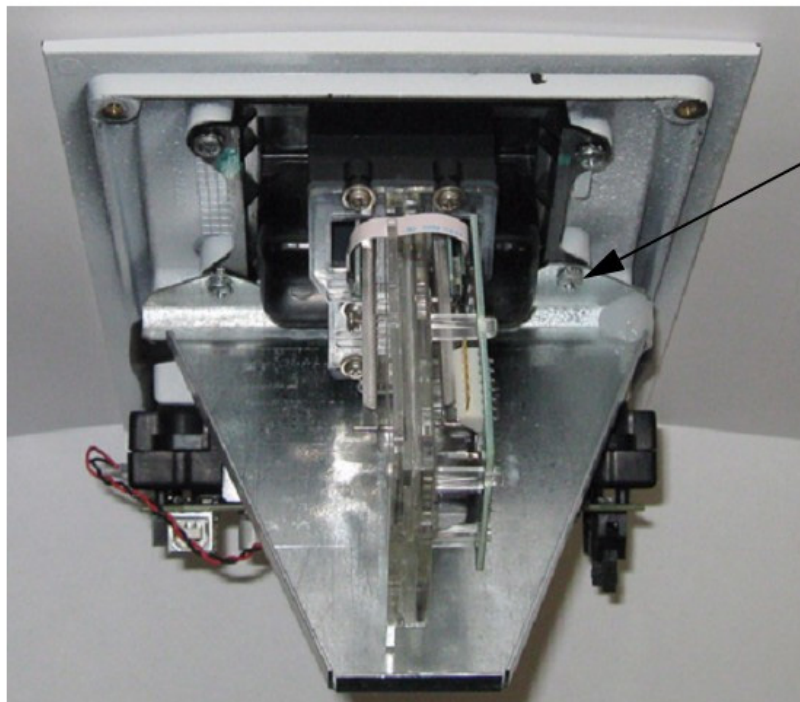

Figure 2: Keypad Protection Bracket

For further details on how to install or configure the iX Pay Secure Payment module product, refer to 000-940014- SPM (US) Startup & Service manual Rev A, Section 5.2.

We are continually analyzing the iX Pay solution for possible performance enhancements, and will release future technical service communications as they are identified.

If you have any questions regarding this memo, or have any product or process recommendations related to iX Pay, please contact your Dresser Wayne Regional Service Manager.

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