

**TECHNICAL****BULLETIN****TECHNICAL BULLETIN: 12-01 Revised****DATE:** February 3, 2012**SUBJECT:** NMD50 Upgrade to Accept Canadian Polymer Notes**AVAILABILITY:** All Authorized Triton Distributors and Third Party Service Providers

This bulletin addresses:		Recommended Implementation is:	
	Documentation Changes	<b>X</b>	<b>Now for all affected units</b>
	Hardware Service Issues		All affected units during next service visit
	Software Announcements		Optional
<b>X</b>	<b>Technical Tips</b>		No implementation required

**Introduction**

In November of 2011, the Bank of Canada introduced a new \$100 note made from a polymer substrate. The Bank will continue introduction of polymer \$50 and \$20 notes in 2012. Paper versions of these denominations will be pulled from circulation over time.

Testing has shown that the Talaris NMD50 may not reliably dispense the polymer notes without making modifications to the dispenser. Reports from the field have shown that some NMD50s appear to dispense the new notes without issues, with others reporting that the notes fail to dispense at all. Best practice recommendation would be to upgrade all NMD50s to ensure top performance in the future.

This tech bulletin addresses the recommendations from Talaris for upgrading the NMD50 dispenser to reliably dispense the new Canadian polymer currency. The upgrade recommendations will vary depending upon the revision of the NMD50.

The format of this bulletin will be to first review the requirements for upgrading, then answer several FAQs.

**Upgrade Requirements by Revision**

**Note:** Through discussions with customers, Triton is aware that many NMD50s in Canada may not be in a “pure state”. That is, over the course of time the dispenser may have parts from different revisions. Dispensers in this condition may require visual inspection in order to determine the extent of the upgrade required.

The end goal of a proper upgrade is twofold: 1) to use the new Talaris CMC board developed for polymer note handling and 2) make certain that the newer “tractor” feed rollers with stronger CRR springs are used in the NMD50’s Note Feeder and Note Qualifier assemblies. The combination of the new CMC board, tractor feed rollers and springs will ensure top performance when dispensing Canada’s polymer currency.

Talaris (formerly DeLaRue) has produced five versions of the NMD dispenser.

Revisions 3-5 require a CMC upgrade through replacement of the older CMC board. (To order this improved CMC, order Triton part number 04005-18112.) This is a hardware component change, not a firmware change. As no special tools or knowledge are required, this upgrade may be performed in the field by a service technician. If a Revision 3-5 NMD has had repairs to the Note Qualifier or Note Feeder, perform a visual inspection to verify the pick rollers are of the “tractor” feed variety.

The older Revisions 1 and 2 of the NMD used smooth rollers in the Note Feeder and Note Qualifier assemblies. These smooth rollers do not always pick the polymer notes reliably; resulting in failed picks or jams due to excessive skewing. In addition, the CRR springs used in Note Qualifiers and Note Feeders of these revisions were not as strong as later models and require replacement. Upgrading these older NMD requires replacement of the CMC board, the Denomination Extensions and the Note Qualifier.

*Due to the number of component changes, Triton strongly recommends replacing the older Revision 1 and 2 dispensers with later versions. Please contact your sales representative for details.*

## FAQs

**Q: I've tested my NMD50 with the new \$100s and it dispenses fine. Why should I upgrade?**

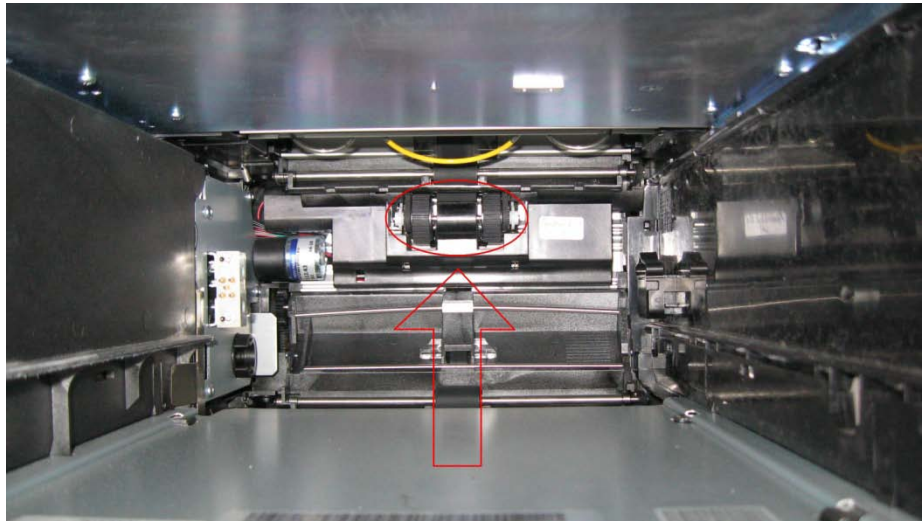
**A:** As stated above, it is best practice to perform this upgrade for all NMD50s. The CMC board upgrade is improved to address issues with dispensing the Canadian polymer currency. Triton independently tested the new CMC and saw marked improvement in the dispensing of polymer notes. The combination of the tractor feed rollers, new CRR springs and the new CMC board kept dispensing performance on par or better than what was seen for paper currency.

**Q: When was the NMD50 Revision 3 released?**

**A:** Revision 3 began production on February 21, 2008, beginning with NMD serial number 1006523. Dispensers manufactured after this date may only require a CMC board upgrade, if the dispenser has retained its original tractor feed rollers.

**Q: How can I tell if my NMD has smooth rollers in the Note Feeder or Note Qualifier?**

**A:** The rollers are located in the denomination extensions (feed channels) of the dispenser. The “tractor” feed rollers are grooved as shown in the following photos:



**Roller Location in Denomination Extension (Feed Channel)**



**Tractor Rollers Necessary for Proper Polymer Note Picking**



**Smooth Rollers Used on NMD50 Revisions 1 and 2**

**Q: Where is the CMC board located?**

**A:** The CMC board is located on the left side of the dispenser next to the NMD's throat as shown in the photo:

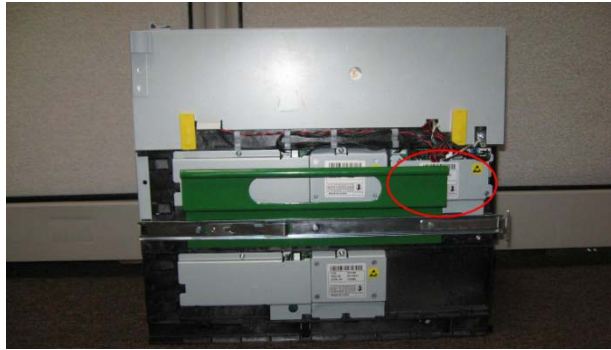


Photo Showing Location of the CMC Board (Circled)

**Q: In the future, how can I tell if I have a new CMC board on my NMD50?**

**A:** The Talaris CMC part number has not changed, but an improved CMC board may be identified by examining the CMC's board revision on its cover. If the revision box "31" is marked, the CMC board is the improved version for polymer note handling:



Photo Showing Revision Mark Location on Improved CMC Board

**Q: What part number do I order to get the new CMC board?**

**A:** Order Triton Part Number: 04005-18112

**Q: What firmware is recommended for use on the new CMC board?**

**A:** Talaris recommends using the latest firmware, which is currently NMD050 2019.02.08 and NMD050e (Revision 5) 2019.40.01

**Q: When will Triton begin shipping NMD50s with the new CMC?**

**A:** All NMD50s shipping to Canada from January 2012 forward will have the upgraded CMC installed. This includes repaired and refurbished dispensers.

**Q: Will Triton perform upgrades to the NMD50 Revisions 1 and 2?**

**A:** Due to the number of components that must be replaced, it is not cost-effective to send in an NMD50 Rev 1 or 2 to Triton for upgrading. Instead, Triton will offer exchange program for these older NMD50s. Please contact your sales representative for details on this offer.

**Q: Has Triton tested all denominations of the new Canadian polymer currency?**

**A:** No, it is not possible to test denominations other than \$100s and \$50s at this time. The Bank of Canada will not issue currency in advance of the public release date for other denominations. For example, this means that Triton has not tested polymer versions of the \$20 bill. The \$20 bill will not be available for testing until September 2012.

However, Bank of Canada has stated that the format and material makeup of the bills will remain the same for all denominations. The clear panel used in these bills will remain in the same location, although there will be variation in the hologram it contains. If these plans are upheld, then there is a reasonable expectation that there will be no issues with dispensing other polymer denominations.

**Q: Can I use both paper and polymer currency in the same cassette?**

**A:** Yes, a cassette can be loaded with both polymer and paper currency.

**Q: How should one load Canadian polymer currency in a cassette?**

**A:** The Canadian polymer bank notes contain Braille embossing. When the polymer bank notes are stacked in the same orientation, the embossing will make one side of the note stack appear “thicker” than the other. The difference in thickness may result in poor note pick and note skewing problems in every dispenser. It is highly recommended that when loading cassettes, the polymer notes be placed in a different orientation in every bundle of 50 notes:



**Place Polymer Notes in Different Orientations Every 50 Notes**

**If you have any questions, please contact Technical Support or our Parts Department at 1-901-248-6047 from outside North America or toll free in the U.S./ Canada 1-800-259-6672.**