

**Mississippi Department of Public Safety
Criminal Information Center**



*MCHS Tenprint Scanning Station Certification
Test Procedures*

Version 5.10 R01

updated

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Change Log

Date	Version	Change
June 23, 2003	5.00	(New document)
January 31, 2014	5.02 R25	Updated.
November 4, 2015	5.02 R28	Updated.
October 13, 2016	5.02 R29	Updated and expanded. Some tests moved. No change to tests other than some test data values.
November 5, 2016	5.02 R30	Updated for clarification. For responses: added another type and added that fixed-width font is needed.
January 18, 2017	5.02 R31	Added MCHS Tenprint and Palm Print Certification Test Messages document. Added detail to test steps in Test 4.5.
February 28, 2017	5.02 R32	Added Verify Configuration steps and moved Response Test to Test 4.1. Added to ATN Block test: verify rollover to next block. Added Test 4.9 to assess scanner device and accuracy of capture, Added to Print card test: print on preprinted card stock; print stored or entered transactions, Added who performs test steps. Added other changes in test step structure and test transaction values (but what is tested is the same). Changed to 9 character MSCERTxxx ORIs.
March 31, 2017	5.02 R33	Modified test data.
May 9, 2017	5.02 R34	Corrected sequence of configuration verification steps. Added Vendor Set Up step. Added clarifications.
June 19, 2017	5.02 R35	Revised instructions in tests where only required fields need to be entered. Revised instructions that require the same TCN in order to identify a particular transaction within a test so they are still unique.

Date	Version	Change
June 30, 2017	5.02 R36	Revised some steps within Test Procedures and revised some test data - but no overall change to tests. Updated Section 4.1 to specify configuration for max number of days for POP3 mail file. Updated Test 4.1 to address requirements to delete messages from scanning station POP3 mail file. Added Test 4.9.2 for cardscans.
March 30, 2018	5.02 R37	Included submission of Sample Transactions in General Tenprint Certification Process Requirements.
October 25, 2019	5.02 R38	Numerous clarifications. Renumbered tests.
December 31, 2019	5.02 R39	Enhanced ATN test. Modified Edit Table Download test. Numerous clarifications.
January 15, 2020	5.10 R00	Updates to correspond to ICD 5.10.
November 14, 2020	5.10 R01	Updates to include type-10 facial images for Arrest transactions

1.0 INTRODUCTION AND REFERENCES

All scanning stations connected to the Mississippi Criminal History System (MCHS) for the purpose of submitting tenprint transactions to MCHS and the FBI's NGI must be tested and certified by the Mississippi Department of Public Safety Criminal Information Center (hereafter referred to as the CIC) using the criteria contained in this document.

The objectives of the certification process are to verify that:

- Tenprint transactions can be entered on a scanning station and properly transmitted to MCHS
- The scanning station properly validates the content of each field
- Administrative messages and transaction responses are properly received and processed by a scanning station
- Transaction responses can be printed at the scanning station
- Transactions can be stored at the scanning station and resubmitted
- Tenprint cards can be printed on livescan printers
- Palm print records can be entered and included in a tenprint transaction (if vendor will be including palm prints in the transactions)
- Facial photo records can be entered and included in a tenprint transaction (if vendor will be including facial images in the arrest transactions)
- SMT photo records can be entered and included in a tenprint transaction (future)

This document includes tests for the Type 1, 2, 4 and 10 (optional) records in a tenprint transaction.

Tests for the Type 15 palm print records are covered in:

- MCHS Palm Print Scanning Certification Test Procedures

The following references describe the requirements for the tenprint scanning stations:

- MCHS Tenprint Interface Control Document, version and release in effect at time of certification.
- MCHS Security Policy, version in effect at time of certification

The following reference contains information needed by the vendor and the certification test conductor:

- Tenprint Transaction Reject Notice and Warning Notice Error Messages, version and release in effect at time of certification.

CIC will use the following during certification:

- MCHS Tenprint Scanning Station - CIC Certification Reference Guide
- MCHS Tenprint and Palm Print Certification Test Messages

Prior to certification, the vendor will submit sample transactions as described in:

- Instructions for Sample Transactions to Submit to CIC for Pre-Certification Review

2.0 CERTIFICATION PROCESS

1. The software used in the certification tests must meet the interface requirements documented in the MCHS Tenprint Interface Control Document (ICD).
 - If the vendor is already certified for 5.02, a single configuration may be selected for the 5.10 certification. Test will be tailored to include: 5.10 changes and recent vendor errors identified by MCHS (across all vendor configurations) and optionally type-10 facial images.
 - If the vendor is 5.10 certified but did not perform test(s) with facial images they will be required to perform required test at the CIC in order to be approved to submit facial images.
2. Vendors must contact the CIC at (601) 933-2601 to arrange for certification.
 - If the vendor is proposing multiple configurations, each configuration must be certified separately. If the vendor is proposing both livescans and cardscans, each type of scanning station must be certified separately (but can be done during one certification session at the CIC). If the vendor is proposing to support all types of agencies (refer to Tenprint ICD section 4.1), types of submission/TOTs required for each must be certified.
 - If vendor's configuration includes a camera to capture type-10 facial images in Arrest transactions, [Tenprint Certification Test 4.6](#) and [Test 4.7](#) must include type-10 records.
 - If the vendor is certifying for palm prints as well as tenprints, note that: (1) the palm print certification tests are in a separate document and (2) tenprint fingerprint quality tests (in this document) will also be conducted for palm print scanners.
3. Before scheduling a certification, the vendor must:
 - Complete a CIC form that specifies what the vendor is certifying for.
 - Submit sample transactions to the CIC. The CIC will provide instructions along with sample administrative messages (refer to Tenprint ICD section 4.3) for use when creating the sample transactions.
 - The certification date will not be scheduled until after the vendor's sample transactions have been submitted and no problems are detected.
4. For the certification session:
 - The vendor must install and operate a test configuration including equipment and software in the CIC test environment. The test configuration must include scanning stations, all biometric scanners, printer, camera and operating documentation, user manuals, or other materials that would normally accompany any subsequently purchased system. The test configuration must be either an exact replica of a system to be installed at a customer site or a typical/representative configuration.
 - Shortly before the scheduled certification date, the CIC will provide vendor with configuration information for the certification test environment (e.g., station id(s) and agency ORIs).
 - The CIC test environment is located at 3891 Highway 468 West, Pearl, MS. All expenses for shipping, handling, installing, and testing the certification system will be borne by the vendor. Following certification, the vendor is responsible for de-installing and removing the certification system.
5. CIC personnel will conduct the certification tests with the vendor's participation.
6. The Test Steps will be performed using the scanning station software and operator interface that is part of the vendor product.
7. For certification, the vendor's software must allow a tester to enter the certification Transaction Control Number (TCN) as described in section 6 of the MCHS Tenprint ICD.
8. A test may be repeated at the discretion of the CIC to verify correct operation.
9. CIC may, at its discretion, perform additional tests for, or request demonstrations of, compliance with the requirements in the MCHS Tenprint ICD.
10. Usually any problems detected during certification will need to be corrected in order to obtain certification. However, the CIC will occasionally, at its discretion, allow the vendor to demonstrate that the problem is corrected during the installation of a scanning station at their first State site.

11. Subsequent to certification testing at the CIC, the CIC will notify vendors of certification. See MCHS Palm Print Scanning Certification Test Procedures for additional information regarding Phase 2 of Palm Print Certification.
12. When each new station is installed at a local agency or the CIC, refer to the Installation Checklist in the MCHS Tenprint ICD and complete each step before submitting transactions.
The vendor must send a notice to the CIC not less than 10 days prior to an installation at a customer site.
If requested by the CIC, also provide a schematic of the system to be installed with an explanation detailing any changes from the configuration used by the vendor in the certification process. The CIC will review the installed configuration. If there are any changes from the certified configuration, the customer site may not operate in a live mode until the CIC approves the configuration.
Refer to the complete installation checklist in section 5.2 of the MCHS Tenprint ICD .
13. To prevent transactions from being rejected, it is essential that the scanning station perform all of the validations listed in the ICD before sending them to MCHS. After installation of each scanning station, the CIC will monitor the transactions and will contact the vendor if problems are detected.

3.0 TEST PREPARATIONS

3.1 CIC OBTAINS INFORMATION FROM AND GIVES INFORMATION TO VENDOR TO PREPARE FOR CERTIFICATION

- CIC will obtain information from the vendor when the vendor requests certification of a livescan or cardscan with tenprint, and possibly palm print, scanner devices. (CIC: Refer to CIC Ref Guide 3.1.1)
- CIC will request sample transactions from a new vendor and for first palm print scanner-only certification. (CIC: Refer to CIC Ref Guide 3.1.2) Certification testing will not be scheduled until the sample transactions are submitted to the CIC and no defects are detected.
- CIC provides certification test information to vendor when certification is scheduled (CIC: Refer to CIC Ref Guide 3.1.3).
- CIC will give certification information to vendor prior to their arrival at the CIC. (CIC: Refer to CIC Ref Guide 3.1.4)

3.2 CIC PREPARATIONS PRIOR TO VENDOR'S ARRIVAL AT CIC

- CIC will assign test conductor and prepare for certification prior to vendor's arrival at CIC. (CIC: Refer to CIC Ref Guide 3.2)

3.3 CIC SETS MCHS CONFIGURATIONS DAY PRIOR TO VENDOR'S ARRIVAL FOR CERTIFICATION TESTS

- CIC verifies that the configurations are properly set to begin Tenprint Certification tests. (CIC: Refer to CIC Ref Guide 3.3.1 and 3.3.2)

3.4 VENDOR SETS UP AT CIC ON DAY OF CERTIFICATION

3.4.1 Vendor and CIC Review Requirements for Conducting Tenprint Certification Tests

TC and vendor: Before vendor begins setting up for Tenprint Certification tests, review the following:

1. Vendor must successfully complete a configuration verification step or an individual test before continuing with the next configuration verification or test.
2. In each test, the CIC test conductor will indicate whether the vendor or the test conductor will capture fingerprints and enter the text data.
3. The test transactions require a special TCN format as described in the Tenprint ICD section 6.0.
4. All three types of transactions - arrest (ARR), applicant (APP), and DOC Inmate Intake (DOC) are included in these tests. Which types are included in the tests depends on which Types of Submission the vendor is certifying for. However, Test 4.11 requires submission of APP transactions, with reason fingerprinted CRIMINAL INQUIRY - even if certification is not for Law Enforcement agencies.
5. In each test transaction, create the type of transaction indicated in the individual test.
 - 1.07 Print Agency ORI
For livescans - Hardcoded - always MSCERT004
For cardscans - User-entered as indicated the ICD and values are as indicated in the individual test transactions
 - 1.08 Arrest/Applicant/DOC Agency ORI
For ARRs - generated from field 2.702, as indicated in the ICD
For APPs and DOCs - user-entered as indicated in the ICD and values are as indicated in the individual test transactions
 - Use the Type 1 and Type 2 field values as specified in each test step.
 - Always follow the specific instructions for TCN
 - Always follow the specific instructions for Name
(The special TCN format guarantees that the transaction will be rejected except for Test 4.11.)
 - As specified in each test, in the OACN, include the vendor's name, as assigned by the test conductor, and the test number.
6. Except in Test 4.11, a combination of values in the test data and settings in MCHS configuration files are set up to ensure that test transactions are not stored in MCHS or in the FBI's Next Generation Identification (FBI/NGI) database.
7. In Test 4.11, the transactions are accepted and are sent to the FBI. But the type of transaction (APP) and the reason fingerprinted indicate to MCHS and to the FBI that it is not to be stored.
8. Include all fingerprint images in each test unless the test specifically indicates otherwise.
9. **Always reenter data and capture new fingerprint to submit a new transaction for each test and for each subsequent transaction if more than one transaction is submitted in a test. Do not modify and resubmit an existing transaction.**
10. Do tests in sequence and when directed by the CIC test conductor.
11. CIC will review all submitted transactions. (CIC: Refer to CIC Ref Guide 5.0)
12. If multiple scanners are being certified, some tests will be repeated for each scanner.
13. If palm prints are being certified, the tests are found in a separate document – MCHS Palm Print Scanning Certification Test Procedures.
14. In the test steps, CIC Test Conductor is abbreviated "TC".

3.5 VENDOR SETS UP SCANNING STATION FOR TENPRINT CERTIFICATION TESTS

(CIC: Refer to CIC Ref Guide 3.1.4 and 3.4.2)

Vendor: When configuring the scanning station for certification testing, use the following values:

1. Station Id for tenprint certification testing - specified by CIC test conductor
2. Print Agency ORI (1.07) - MSCERT004 (ICD Appendix A.1)
3. Station IP address - specified by CIC test conductor
4. POP3S mail login - as specified in ICD appendices D and E; uses station id specified above in item 1
5. POP3 maximum number of days messages can remain in POP3 mail file - set to 2 (ICD Appendix D.1)
6. SMTPS To email address for sending transactions to MCHS - as specified in ICD Appendix C
7. SMTPS From email address (and SMTPS login info if vendor software requires it) for sending transactions to MCHS - as specified in ICD Appendix C; uses station id specified above in item 1
8. SMTPS email structure - as specified in ICD Appendix C
9. Version Number (1.02) - as specified in ICD Appendix A.1
10. TCN special format for testing - as specified in ICD section 6; uses station id specified above in item 1
11. Printer - same printer that is in proposed configuration that vendor provided to the CIC
12. Camera - same printer that is in proposed configuration that vendor provided to the CIC

4.0 CERTIFICATION TESTS - TENPRINTS - RECORD TYPES 1, 2, 4 , AND 10

4.1 CONFIGURATION VERIFICATION A - VERIFY POP3S MAIL CONNECTIVITY AND PRINTING AT SCANNING STATION

(CIC: Refer to CIC Ref Guide 4.1)

MCHS Tenprint ICD References: Appendix D

1. **Vendor:** Check POP3 mail file for test station being used for the certification and discard any existing mail.
2. **TC:** Send response 'Configuration Verification A' to the test scanning station.
3. Scanning station automatically retrieves message and prints response on scanning station printer.
4. **TC:** Compare the printed response with the response below. Note that station id is as assigned by the CIC (see 3.2.2 item 1)

```
From: "MCHS" <mchs@mscjis.mchs.state.ms.us>
To: "Local Test Livescan 1" <station_id@mscjis.state.ms.us>
Subject: Configuration Verification A
Content-Type: text/plain
Content-Transfer-Encoding: 7bit
Mississippi Criminal History System

TEST RESPONSE 0 ***
Receipt of this message verifies scanning station POP3S connectivity.
The printed message verifies printer connectivity on the scanning station.
```

If Configuration Verification A is not successful, certification testing cannot commence. Vendor must correct these problems before continuing to the next certification test..

4.2 TEST 4.2 - TRANSACTION RESPONSES TESTS – MISSISSIPPI AND FBI RESPONSES

(CIC: Refer to CIC Ref Guide 4.2)

Objective: Verify receipt and printing of the various responses generated by MCHS and FBI/NGI.

All scanning stations must support printing. (Some agencies may choose to route their responses to an email account, but they must always have the option to switch to printing at the scanning station.)

All documents received by the scanning station must be printed. If a document is not recognized as one of those listed in the ICD, the scanning station cannot discard it - a human must decide what to do with it.

MCHS Tenprint ICD references:

- 4.2 Transaction Response Messages
- 7.0 Identifying Messages Sent from MCHS
- 8.0 Print Responses from MCHS on Scanning Station Printer Requirements
- D Responses from MCHS to a Scanning Station

This test will verify that:

- All valid transaction responses are received and printed in their entirety.
- An unrecognized message is also processed and sent to the printer.

4.2.1 Test Tools

- MCHS Tenprint and Palm Print Certification Test Messages document

4.2.2 Test Steps

1. **Vendor:** Describe how/when scanning station will automatically delete messages from the scanning station's POP3S mail on the MCHS server. (Reference the last paragraph/first bullet of MCHS Tenprints ICD Appendix D.1.)
2. **Vendor:** Check POP3 mail file for test station being used for the certification and discard any existing mail.
3. **TC:** Send one test Transaction Response at a time from the MCHS Server to the scanning station. Send only responses that are applicable to the type(s) of agency for which the scanning station is being certified.

	Transaction Response	Type of Agency
1	Mississippi Search Response for ARR	Law Enforcement
2	Mississippi Search Response for APP	Civil Applicant Law Enforcement
3	Mississippi Search Response for DOC	Department of Corrections
4a 4b	Mississippi Prosecutor Disposition Form Mississippi Court Disposition Form	Law Enforcement
5	Mississippi Reject Notice for ARR	Law Enforcement
6	Mississippi Reject Notice for APP	Civil Applicant Law Enforcement

	Transaction Response	Type of Agency
7	Mississippi Reject Notice for DOC	Department of Corrections (Livescan Only)
8	FBI Search Response for ARR or DOC	Law Enforcement Department of Corrections
9	FBI Search Response for APP	Civil Applicant Law Enforcement
10	FBI Error Response for ARR or DOC	Law Enforcement Department of Corrections
11	FBI Error Response for APP	Civil Applicant Law Enforcement
12	Mississippi DNA Database Collection Form	Law Enforcement
13	Record Under Review	All
14	An email with garbage (for this test, an attached NIST transaction)	All
1-14	All of the above	CIC

4. Scanning station automatically prints response on scanning station printer without human intervention.
5. **TC:** For responses 1 through 13: Compare the printed response with the response in the MCHS Tenprint and Palm Print Certification Test Messages document. Verify that the content is complete.
6. **TC:** For response 14: Verify that at least the first 300 lines of the message are printed. The scanning station must be able to print any message other than those listed in Responses 1 through 13. (Reference the last paragraph of the MCHS Tenprints ICD Appendix D.)
7. **TC:** Verify that the email From, To, and Subject lines are printed.
8. **TC:** Verify that the response is printed and displayed using a fixed-width font. Many of the responses do not format properly unless the scanning station uses a fixed-width font.
9. Repeat steps 3 through 8 for each response that is applicable to the type(s) of agency for which the scanning station is being certified.

This test must be successfully completed before continuing to the next certification test.

4.3 TEST 4.3 - EDIT TABLE DOWNLOAD MESSAGE TEST

(CIC: Refer to CIC Ref Guide 4.3)

Objective: Test the Edit Table Download Messages. The content of the message is used to build the lists of valid values for data entry drop down lists and for the scanning station software to verify that the data entered by the operator is valid. **Failure to properly process the Edit Table Download Messages that are sent by MCHS is one of the most common reasons that transactions are rejected by MCHS.**

MCHS Tenprint ICD references:

- 4.3 Administrative Messages
- 7.0 Identifying Messages Sent from MCHS
- E.1 Edit Table Download Messages
- A.2 Field 7.705 Arrest Charge Set / Citation

This test will verify that:

- All edit tables are automatically and properly installed.

4.3.1 Test Tools

- Download Station Edit Tables capability
- MCHS Tenprint and Palm Print Certification Test Messages document

4.3.2 Test Steps

- TC:** Using 'Download Station Edit Tables', send the Edit Table Message to the test station.
- TC with vendor assistance:** Verify that the latest Edit Tables have been installed by checking the date and time in the description in the Hair Color ZZDoNotUse drop down list on the scanning station.
- TC with vendor assistance:** On the scanning station, review each data entry screen for each type of submission. Compare the contents of each drop down list of valid values on the scanning station with the Edit Table Download Message in the MCHS Tenprint and Palm Print Certification Test Messages document. For the Statute field, a different Edit Table is used for Type of Agency CIC than for other Types of Agency. Compare the contents of the list of valid values on the scanning station with the proper edit table as follows:

Station Id	Edit Table
lstest<n> lctest<n>	Statute
cstest<n> cctest<n>	Statute CIC

This test must be successfully completed before continuing on to Configuration Verification B.

4.4 CONFIGURATION VERIFICATION B - VERIFY SMTPS MAIL CONNECTIVITY AND EMAIL STRUCTURE

(CIC: Refer to CIC Ref Guide 4.4)

MCHS Tenprint ICD references: Appendix C

1. **Vendor:** Create and submit either an arrest transaction or a billable applicant transaction:
 - Use TCN 'CERT-<station_id>-<tot>-VERIFICATION
 - Last Name = 'VERIFICATION'
 - First Name = 'Tenor'
 - Date of Birth = '19000101'
 - Social Security Number = '123456789'
 - Hair Color = 'ZZDoNotUse'
 - Originating Agency Control Number (OACN) = '<vendor name> Verification B'
 - Enter any values in other required fields.
 - APP and ARR: Place of Birth, Race, Height, Weight, Eye Color
 - APP: Reason Fingerprinted, Applicant Agency ORI
 - ARR: Date of Arrest, Arrest Type, Arrest Charge Set, Arrest Agency ORI
 - If the test is for a cardscan: Print Agency ORI, Date Printed
2. Allow 3-5 minutes for the transaction to be processed by Prescreening.
3. **TC and vendor:** Look at the Prescreening Transaction Report:
 - If the transaction is found this verifies scanning station connectivity.
 - To verify email structure: If there are errors on the Reject Notice (and in the Prescreening Report) check for the following:
 - If error message 201, 203, 616, or 710 occurs: Make adjustments and go to step 1 to create and submit a new transaction. The values in the fields referenced in these error messages are used to validate the transactions. If they are missing or incorrect, you will probably get other error messages that are not actually relevant to the type of agency and type of scanning station being certified. Therefore, these errors must be corrected before continuing.
 - Ignore all other error messages.
4. **TC and vendor:** If the transaction is not found in the Prescreening Transaction Report:
 - Check the scanning station id in the SMTPS email from line. It must be the assigned test station id.
 - If the transaction is in the Bad Transactions Log: Make adjustments and repeat this test beginning with step 1 to create and submit a new transaction.
 - If the transaction generated output in the saprinter Log: Most likely the From email address is in error. Make adjustments and go to step 1 to create and submit a new transaction.

If any of Configuration Verification A or B or Tests 4.2 and 4.3 is not successful, certification testing cannot continue. Vendor must correct these problems before continuing to the next certification test.

4.5 TEST 4.5 - LIVESCAN ARREST TRACKING NUMBER (ATN) BLOCK MESSAGE TEST

(CIC: Refer to CIC Ref Guide 4.5)

Objective: Ensure that a downloaded ATN Block automatically becomes active without user intervention and that the ATN check digit algorithm is properly implemented. This test applies only to livescans.

MCHS Tenprint ICD references:

- 7.0 Identifying Messages Sent from MCHS
- E.2 ATN Block Messages
- F ATN Check Digit Algorithm

This test will verify that:

- ATN Block messages are received and blocks are properly updated on the scanning station.
- The check digit on an ATN is properly calculated.
- Livescan automatically uses the Next block when all ATNs in the Current block have been used.
- Livescan properly installs subsequent ATN Blocks
- Livescan does not reassign ATNs that it has already used.
- Livescan does not assign ATNs that are not in its most recently downloaded ATN Blocks message, even if it has used all ATNs in both its Current and Next blocks.

4.5.1 Test Tools

- Maintain or Download ATN Blocks for Livescans capability

4.5.2 Test Steps

1. **TC: On MCHS, update the configuration for this test station to allow ARREST transactions.**
2. **TC:** Using 'Maintain or Download ATN Blocks for Livescans', send the ATN Block Message to the test station. (Manually enter 20 in Current block, 10 in Next block)
3. **Vendor:** Create a new arrest transaction as follows:
 - Create an ARR transaction
 - Use TCN 'CERT-<station_id>-ATNBlockTest1'
 - Enter '<vendor name> Test 4-5' in Originating Agency Case Number (OACN)
 - Enter Type 1 and Type 2 data in required fields as specified below:

2.018 Name	-
Last Name (0)	ATN
First Name (0)	Block
2.020 Place of Birth	US
2.022 Date of Birth (0)	19700101
2.024 Sex/Gender	Female
2.025 Race	Amerind
2.027 Height	510
2.028 Weight	200
2.031 Eye Color	Blue
2.032 Hair Color	Black
2.035 Palm Prints Available	No
2.036 Photo Available	Yes
2.045 Date of Arrest	20170201
2.702 Arrest Agency ORI	MSCERTAR2
2.704 Arrest Type	Adult
2.705 Arrest Charge Set	-
Citation (0)	49-7-83
Severity (0)	Misdemeanor
# Counts (0)	1
Date of Offense (0)	20170101
Action (0)	Arrest Charge

- Capture ten rolled fingerprints and four plain impressions

4. Allow 3-5 minutes for the transaction to be processed by Prescreening.
5. **TC and vendor:** Look at the Prescreening Transaction Report and Reject Notice. If the transaction is not found in the Prescreening Transaction Report:

- If the transaction is in the Bad Transactions Log: Make adjustments and go to step 3 to send a corrected transaction.
 - If the transaction generated output in the saprinter Log: Most likely the From email address is in error. Make adjustments and go to step 3 to create and submit a new transaction.
6. **TC and vendor:** If there are errors on the Reject Notice (and in the Prescreening Report) check for the following:
- If error message [201](#), [203](#), [616](#), or [710](#) regarding email subject line and email from line occurs, Make adjustments and go to step 3 to create and submit a new transaction.
 - If error message [204](#) with Field "Transaction File" occurs, make adjustments and go to step 3 to create and submit a new transaction. Otherwise, continue to step 7.
7. **TC and vendor:** Verify the ATN value as follows:
- Look for error message [591](#) for field ATN. If this error occurs, the ATN field is missing in the Type 2 record.
 - If the scanning station is a livescan, look for error message [703](#) and [704](#) indicating that a matching block for the scanning station id wasn't found in MCHS. If one of these errors occur, either the wrong station id is in the TCN field or the livescan is not properly using the ATN blocks.
 - Look for error message [609](#).
 - If the scanning station is a livescan and this error message occurs, then there is an error in the check digit algorithm. (A sample implementation of the algorithm is provided in the ICD.)
 - If the scanning station is a cardscan and this message appears, either there is an error in the check digit algorithm or the cardscan software didn't validate the value entered by the operator.
 - Use the hyperlink to check the first 9 digits of the ATN. Verify that the number is from the first of the two blocks in the ATN Message that was downloaded.
 - If the hyperlink says "NIST.FormatException", look for error [204](#) and have the vendor fix those errors.
 - Ignore all other error messages.
8. **TC and vendor:** If there was a problem with retrieving and installing the ATN Blocks, repeat steps 2 through 7. Otherwise, repeat steps 3 through 7 to verify that the transaction contains a valid ATN as needed.
9. Continue testing:
- a. **TC:** Using 'Maintain or Download ATN Blocks for Livescans', send the ATN Block Message to the test station. (Manually enter 2 new ATNs in Current block, 2 in Next block)
 - b. **Vendor:** Enter three more Arrest transactions:
 - Use TCNs:
CERT-<station_id>-ATNBlockTest91
CERT-<station_id>-ATNBlockTest92
CERT-<station_id>-ATNBlockTest93
 - Enter Type 1 and 2 data specified in the table in step 2 above
 - Use the same name
 - Enter '<vendor name> Test 4-5' in Originating Agency Case Number (OACN)
 - Capture ten rolled fingerprints and four plain impressions
 - c. **TC:** Look at the Prescreening Transaction Report at the third arrest transaction entered.
 - Check first 9 digits of the ATN. Verify the 9 digits are in the Next ATN Block range.
 - If the ATN is not in the Next range:
 - Verify that the ATN was not previously used by looking at ATNs in previously submitted transactions. Also look for error [528](#).
 - Repeat steps a through c as needed.
10. Continue testing:
- a. **TC:** Using 'Maintain or Download ATN Blocks for Livescans', send the ATN Block Message to the test station. (Manually enter 2 new ATNs in Current block, 2 in Next block)

- b. **Vendor:** Enter five more Arrest transactions:
 - Use TCNs:
 - CERT-<station_id>-ATNBlockTest101
 - CERT-<station_id>-ATNBlockTest102
 - CERT-<station_id>-ATNBlockTest103
 - CERT-<station_id>-ATNBlockTest104
 - CERT-<station_id>-ATNBlockTest105
 - Enter Type 1 and 2 data specified in the table in step 2 above
 - Use the same name
 - Enter '<vendor name> Test 4-5' in Originating Agency Case Number (OACN)
 - Capture ten rolled fingerprints and four plain impressions
 - The livescan should not assign an ATN to the fifth transaction since the ATN Blocks message included only four ATNs and the livescan should not allow the transaction to be submitted to MCHS.
 - c. **TC:** If the fifth transaction was submitted, look at the Prescreening Transaction Report.
 - Check first 9 digits of the ATN in the last transaction to determine what number was assigned.
 - Repeat steps a through c as needed.
11. Do the following to set up for test in step 12:
- a. **TC:** Using 'Maintain or Download ATN Blocks for Livescans', send the ATN Block Message to the test station. (Manually enter 2 new ATNs in Current block, 4 in Next block)
 - Vendor: Enter three more Arrest transactions:
 - Use TCNs:
 - CERT-<station_id>-ATNBlockTest111
 - CERT-<station_id>-ATNBlockTest112
 - CERT-<station_id>-ATNBlockTest113
 - Enter Type 1 and 2 data specified in the table in step 2 above
 - Use the same name
 - Enter '<vendor name> Test 4-5' in Originating Agency Case Number (OACN)\
 - Capture ten rolled fingerprints and four plain impressions
12. Last test:
- a. **TC:** Using 'Maintain or Download ATN Blocks for Livescans', send the ATN Block Message to the test station. (Specify **New Next Block** and request 30 ATNs)
 - Note that Current Block will be the same as the Next block in step 11.
 - b. **Vendor:** Enter one more Arrest transaction:
 - Use TCN: CERT-<station_id>-ATNBlockTest121
 - Enter Type 1 and 2 data specified in the table in step 2 above
 - Use the same name
 - Enter '<vendor name> Test 4-5' in Originating Agency Case Number (OACN)
 - Capture ten rolled fingerprints and four plain impressions
 - c. **TC:** Look at the Prescreening Transaction Report.
 - i. Check first 9 digits of the ATN.
 - If the 9 digits are in the Current ATN Block range and were not previously used this is as expected and testing is complete.
 - If the first 9 digits is not in the Current range:
 - If the 9 digits are in the Next ATN Block range, this is acceptable and testing is complete.

Normally, when a new ATN Block message is sent, the Next ATN Block range from the previous ATN Block message will become the Current ATN Block range of the

new message. This allows for submission of transactions that had already been created, but not sent, can still be submitted.

- Repeat Step 11 and Step 12 a through c as needed.
- d. There should be a sufficient number of ATNs remaining for the rest of the certification tests.

This test must be successfully completed before continuing to the next certification test.

4.6 TEST 4.6 - TENPRINT TRANSACTION TESTS - RECORD FORMAT AND FIELD CONTENT

(CIC: Refer to CIC Ref Guide 4.6)

Objective: Verify the format of tenprint transactions with Type 1, 2, 4 and 10 (optional) records and the content of hardcoded and generated fields. Optionally, this test is also used to do an initial assessment of fingerprint quality using the tenprint (or palm print) scanner as well as Type 10 facial images.

MCHS Tenprint ICD references:

- 4.1 Tenprint Transactions - Types of Agencies and Types of Submissions
- A.1, 2, 3, 4 Content of each Record Type in a Transaction – Type 1, 2, 4 and 10 (optional) Records
- B ANSI/NIST Fingerprint Transmission Format
- C Transactions from a Scanning Station to MCHS

This test will verify that:

- Each transaction is successfully submitted to the MCHS Prescreening process.
- Prescreening does not detect any format or content errors (other than those indicated to ignore).
- The transaction is compliant with the ANSI/NIST format as specified by the ICD.
- All data entered at the scanning station is included in the transaction.

4.6.1 Test Tools

- Checklist of test transactions applicable to this certification (CIC Ref Guide 3.2 item 2)
- For cardscans, tenprint card (CIC Ref Guide 3.2 item 6)
- MCHS Tenprint and Palm Print Certification Test Messages document

4.6.2 Test Steps

Follow the steps in this test for each of the test transactions listed in the table below that is applicable to the type(s) of agencies for which the scanning station is being certified. Enter the transactions in the order that they are listed.

Enter one test transaction at a time. The test conductor will indicate when the next test transaction can be entered. Errors in a test transaction must be corrected before another test transaction can be entered.

The values to be entered for each of these test transactions are found in [Appendix B](#).

Appendix B	Test Transaction TCN	Type of Agency
B.1.1	CERT-<station_id>-LE-Arrest1	Law Enforcement
B.1.2	CERT-<station_id>-LE-Arrest2	Law Enforcement
B.1.3	CERT-<station_id>-LE-LEApp1	Law Enforcement
B.1.4	CERT-<station_id>-LE-CIO1	Law Enforcement
B.1.5	CERT-<station_id>-LE-APPforSOR1	Law Enforcement
B.1.6	CERT-<station_id>-LE-Arrest3	Law Enforcement
B.4.1	CERT-<station_id>-CIC-Instate1	Law Enforcement
B.2.1	CERT-<station_id>-CA-BillableApp1	Civil Applicant

Appendix B	Test Transaction TCN	Type of Agency
B.2.2	CERT-<station_id>-CA-NoChargeApp1 - see note in step 2	Civil Applicant
B.2.3	CERT-<station_id>-CA-BillableApp2	Civil Applicant
B.3.1	CERT-<station_id>-DOC-Intake1	Department of Corrections (Livescan Only)
B.3.2	CERT-<station_id>-DOC-LEApp1	Department of Corrections (Livescan Only)
B.3.3	CERT-<station_id>-DOC-Intake2	Department of Corrections (Livescan Only)
	All of the above	CIC

A transaction will pass certification requirements when the only errors in the reject notice are those listed in step 6.

Follow the steps below for each of the test transactions listed in the table above:

1. Vendor with TC observing:

- Before entering the Type 1, Type 2 and Type 10 (optional with arrest transaction) data for each transaction after the first one:
 - Verify that the data entry fields on the scanning station's data entry screen are either empty or contain the pre-set default.
 - Ensure that none of the data from the previous transaction still appears on the data entry screen.

2. Vendor with TC observing: Create the next new test transaction from the table above:

- Use the TCN indicated in the table.
- Enter the Type 1 and Type 2 data specified in [Appendix B](#).
 - Enter text in mixed case as indicated.
 - Note regarding Employment and Residence addresses:
 - The test data may indicate "empty" fields between two populated fields - e.g. Address1 and Address 3 populated, but not Address 2. The purpose of the test data is to ensure that invalid separator situations do not occur. If scanning station software does not allow empty address lines, this is OK. Vendor must demonstrate this to the test conductor.
- In ARR and APP transactions, enter '<vendor name> Test 4-6' in Originating Agency Case Number (OACN).
- Capture ten rolled fingerprints and four plain impressions.
- Only for arrest transactions - if station has a camera and vendor wants to be certified for facial images:
 - Capture three facial images with left, front and right poses with a neutral facial expression
 - In one of the tests, attempt the following and verify that the station does not allow these cases:
 - Try to capture a facial image with no face in the image. Verify that the station does not allow this image to be used as a facial image.
 - Try to capture a facial image with a face wearing glasses. Verify that the station does not allow this image to be used as a facial image.
 - Capture only left and right poses but no frontal pose. Verify that the station does not allow this transaction to be submitted.
 - Enter the Type 10 data specified in [Appendix B](#) for each facial image captured
- Note regarding CA-NoChargeApp1:

- Scanning station software may only allow a No Charge Resubmit transaction to be submitted by using the originally submitted Billable APP and may automatically populate the Transaction Control Reference Number field 1.10. If so, rather than using the data specified in [Appendix B.2.2](#), vendor must demonstrate how this is accomplished. Since there will not be an FBI Error Response (ERR), the vendor software may not allow a No Charge Resubmit transaction to be submitted.
3. **Vendor:** Submit the transaction.
 4. **TC:** Allow 3-5 minutes for the transaction to be processed by Prescreening.
 5. **TC and vendor:** Look at the Prescreening Transaction Report.
 - If the transaction is not found in the Prescreening Transaction Report then:
 - If the transaction is in the Bad Transactions Log:
 - Make adjustments and go to step 3 to send a corrected transaction.
 - If the transaction generated output in the saprinter Log:
 - Most likely the From email address is in error: Make adjustments and go to step 3 to create and submit a new transaction.
 6. **TC and vendor:**
 - Otherwise, if the transaction is found in the Prescreening Transaction Report then:
 - If there are errors on the Reject Notice (and in the Prescreening Report) check for the following:
 - If error message 201, 203, 616, or 710 regarding email subject line and email from line occurs:
 - Make adjustments and go to step 3 to create and submit a new transaction.
 - If error message 204 with Field "Transaction File" occurs:
 - Make adjustments and go to step 3 to create and submit a new transaction.
 - Otherwise, continue to step 7.
 7. **Vendor:** Review the Reject Notice.
 - Use the Tenprint Transaction Reject Notice and Warning Notice Error Messages document and the ICD to assist in determining the cause of errors.
 - **If there are errors, do not create and submit a corrected transaction. Coordinate with the TC before submitting another transaction.**
 - IGNORE the following error messages (they are either intentional, the subject of subsequent tests, or validations that are not to be implemented by the scanning station software)
 - "T" Errors indicating a test transaction" messages
 - 517, 519 through 521, 531 through 532, 537-538, 540, 545 through 552, 558
 - 562-564 if a no charge billable applicant resubmit transaction
 - 609, 651-655
 - 705
 - 706 only if from a cardscan and Print Agency value specified in [Appendix B](#) is MSCERT003
 - 740, 741
 - 801, 871, 872
 8. **TC:** While the vendor is reviewing the reject notice, review the Prescreening Transaction Report.
 - a. Look at the error messages:
 - IGNORE the messages listed in step 7.
 - IGNORE all "Correctable or allowed errors". (They are either intentional or they are the subject of subsequent tests)
 - If error message 204 or 205 occurs:
 - Have the vendor correct these first, before addressing any other error messages and go to step 2 to create and submit a new transaction.
 - If error messages 204 and 205 do not occur:
 - Look at other messages that are not in listed step 7.

- If any other errors occur, have the vendor correct these first, before going on to step b, and go to step 3 to create and submit a new transaction.
- b. Once all of the errors not listed in step 7 have been eliminated, use the View hyperlink to verify the following: (Note - If the hyperlink says "NIST.FormatException", look for error 204 - see step a above.)
- Type 1 field 1.03 Transaction Content:
 - Beginning with the second occurrence of the Contents field, verify there are entries for the correct number of each record type - one Type 2, 14 Type 4s and optionally three Type 10s
 - Presence of the Type 2 and Type 4 records:
 - Verify that the transaction includes each of the expected Type 2 record, and 14 Type 4 records. There must be one Type 4 for each finger plus four more records for the plain impressions.
 - Presence of the Type 10 records:
 - Verify that the transaction includes each of the expected Type 10 records. There must be one Type 10 for each facial image captured.
 - Type 1 Fields: Verify the data content of each field.
 - Verify that the content of the following fields:
 - 1.02 Version Number - '0510'
 - 1.04 Type of Transaction - as indicated in [Appendix B](#)
 - 1.05 Transaction Date - today's date
 - 1.09 Transaction Control Number (TCN) - as indicated in [Appendix B](#)
 - 1.10 Transaction Control Ref No (TRN) - populated only in Applicant No Charge Resubmit transaction in [Appendix B.2.2](#)
 - 1.11 Native Scanning Resolution - '19.69'
 - 1.12 Nominal Transmitting Resolution - '19.69'
 - 1.13 Domain - as indicated in ICD Appendix A
 - Verify the content of the following fields:
 - For all TOTs: 1.07 Print Agency ORI
 - Livescan: Value designated by the CIC for certification scanning station
 - Cardscan: Value indicated in test transaction
 - For ARRs: 1.08 Arrest Agency ORI
 - Same as value for 2.702 Arrest Agency ORI indicated in test transaction
 - For APPs: 1.08 Applicant Agency ORI
 - Value indicated in test transaction
 - For DOCs: 1.08 DOC Agency ORI
 - Livescan: Value indicated in test transaction
 - For the NoChargeApp1 transaction in [Appendix B.2.2](#), field 1.10 Transaction Control Ref No. is populated as indicated in the test transaction in Appendix B.
 - Type 2 Fields: Verify the data content of each field.
 - Verify that the content of each field is as specified in [Appendix B](#).
 - If Appendix B does not indicate that a field is to be populated, verify that there is no data in that field. (E.g., no data was carried over from the previous transaction.)
 - Type 10 fields. For each Type 10 record:
 - Find the SAP level in field 10.013
 - If the SAP level is 40 or higher, then verify that field 10.026 (Subject Facial Description) contains "NEUTRAL" as one of the values

- Look at the facial images and verify there is a separate Type 10 record for left, right and frontal poses
 - For the frontal pose (indicated by 10.020), verify that the image is indeed a frontal pose.
9. **TC:** If the transaction is an ARR from a livescan, verify that there are no duplicate ATNs. To ensure the livescan isn't reusing ATNs, look at the ATNs in the Prescreening Transaction Report.
10. **Vendor with TC observing:** Create and submit another transaction for this test if requested by test conductor:
- Use the same TCN but add a LETTER after the last digit
 - Change the first name by adding 'Two', 'Three', etc after the name in [Appendix B](#)
 - Use the same OACN '<vendor name> Test 4-6'
 - Capture ten rolled fingerprints and four plain impressions

This test must be successfully completed before continuing to the next certification test.

4.7 TEST 4.7 - TENPRINT TRANSACTION TESTS - DATA ENTRY AND SCANNING STATION VALIDATION

(CIC: Refer to CIC Ref Guide 4.7)

Objective: Verify the field validations of user-entered fields in Type 1, Type 2 and Type 10 records. This test verifies that only valid field values, as specified in the ICD, are included in the Type 1, Type 2 and Type 10 records (optional).

In this test, the test conductor enters invalid data to ensure that the scanning station software validates all field values and only allows error-free transactions to be sent to MCHS. The test conductor also verifies that all valid values can be entered.

This test is not testing or assessing the operator interface. The scanning station's operator interface serves as a tool to test the validation of field values.

MCHS Tenprint ICD references:

- 4.1 Tenprint Transactions - Types of Agencies and Types of Submissions
- A.1, 2 Content of each Record Type in a Transaction – Type 1, 2, and 10 Records

This test will verify that:

- Fields (both required and optional) on a data entry screen meet format and content validation requirements.
- Attempts to enter values that do not meet the requirements are caught at the time of data entry by the scanning station software and cannot be submitted in a transaction.
- Data entry is easy and efficient.

4.7.1 Test Tools

- Certification Data Entry Checklists for type(s) of agency and types of submissions applicable to this certification capability (Refer to CIC Ref Guide 3.2 item 3 and CIC Ref Guide Appendix B)
- For cards, tenprint cards (CIC Ref Guide 3.2 item 6)
- MCHS Tenprint and Palm Print Certification Test Messages document
- Scanning station's data entry screens

4.7.2 Test Steps

Follow the steps in this test for each type of agency and type of submission listed below that is applicable to the type(s) of agencies for which the scanning station is being certified.

Type of Agency	Type of Submission
Law Enforcement	Arrest
Law Enforcement	Law Enforcement Applicant
Law Enforcement	Criminal Inquiry
Law Enforcement	APP for SOR
Civil Applicant	Billable Applicant
Civil Applicant	No Charge Applicant Resubmit
Department of Corrections	Inmate Intake

Type of Agency	Type of Submission
Department of Corrections	Law Enforcement Applicant
CIC	All of the above
CIC	Instate Inquiry

1. **TC:** Verify data entry validations for each field.

Use the checklists to verify the following data entry requirements. (Refer to CIC Ref Guide Appendix B)

Check the following three things for each field:

(If it is necessary to try to submit a transaction to verify these validations, use TCN 'CERT-<station_id>-<tot>-Validation)

a. Field Names:

- Verify that only fields that are applicable to the type of submission appear on the screen.
- For cardscans, verify that the fields are in the same sequence they are on an arrest or applicant card.

b. Field length and characters/value:

Each field either has requirements to use an edit table from the Edit Table Download message or has requirements for a combination of min/max length and valid characters.

i. Fields whose values are defined by the tables in the Edit Table Download message:

- Verify only those values can be successfully entered. (The scanning station may use drop down lists or another selection mechanism.)
- Verify that the operator cannot enter a value that is not on the drop down list (e.g., overriding by using the Escape key). **Allowing an operator to override a value without subsequent validation at the scanning station is one of the most common reasons that transactions are rejected by MCHS.**

ii. All other fields: verify the min/max length and valid characters:

- Length:
 - Verify that the maximum length of each field by counting the number of characters can be entered.
 - For fields with a minimum length, verify that a value below the minimum length will not be accepted by the scanning station.
- Characters/Value:
 - Verify that valid characters can be entered.
 - Verify that invalid characters cannot be entered.

c. Occurrences:

- Verify that the maximum number of occurrences can be entered for each field. (Verify either visually or by entering multiple occurrences.)

2. **TC:** Verify required fields.

Verify that data entry is not considered completed and transmission of a transaction is not allowed if required fields are missing.

a. ARR transaction:

- **TC:** Create an ARR transaction.
 - Use TCN 'CERT-<station_id>-<tot>-Require
 - Try to omit each required field:
 - APP and ARR: Name, Place of Birth, Date of Birth, Sex/Gender, Race, Height, Weight, Eye Color, Hair Color
 - APP: Reason Fingerprinted, Applicant Agency ORI

- ARR: Date of Arrest, Arrest Type, Arrest Charge Set, Arrest Agency ORI
 - If the test is for a cardscan: Print Agency ORI, Date Printed
 - Enter '<vendor name> Test 4-7' in Originating Agency Case Number (OACN).
 - Capture ten rolled fingerprints and four plain impressions.
 - If configuration includes a camera
 - Capture frontal, left and right facial images
 - For SAP 40 and above, try to omit facial description. Verify that the station does not allow this transaction to be submitted.
 - If the transaction is submitted:
 - Allow 3-5 minutes for the transaction to be processed by Prescreening.
 - **Vendor:** Review the Reject Notice.
 - Look for error messages for errors related to missing required fields.
 - For example: error messages [516](#) and [591](#). Ignore error messages not related to missing required fields.
 - Use the Tenprint Transaction Reject Notice and Warning Notice Error Messages document and the ICD to assist in determining the cause of any of the errors in this and subsequent steps in this test.
 - **If there are errors, do not create and submit a corrected transaction. Coordinate with the TC before submitting another transaction.**
 - **TC:** While the vendor is reviewing the reject notice, review the Prescreening Transaction Report.
 - Look for error messages related to missing required fields. For example error messages [516](#) and [591](#).
 - Ignore error messages not related to missing required fields.
 - **TC:** Repeat this process as needed
 - b. APP transaction: Repeat step 2a for an APP transaction.
 - c. DOC transaction: Repeat step 2a for a DOC transaction.
3. **TC:** Verify that values are not truncated when a transaction is submitted.
- a. ARR transaction:
 - **TC:** Create an ARR transaction.
 - Use TCN 'CERT-<station_id>-<tot>-Truncate
 - Enter the maximum length value in each field (for fields that use a list of valid values, choose the longest in the list)
 - Enter '<vendor name> Test 4-7' in Originating Agency Case Number (OACN)
 - Capture ten rolled fingerprints and four plain impressions
 - If configuration includes a camera
 - Capture frontal, left and right facial images
 - For SAP 40 and above, try to enter more than 50 values for the Subject Facial Description (10.026) field in each Type 10 record. Verify that the station does not allow this transaction to be submitted.
 - **TC:** Submit the transaction and:
 - Allow 3-5 minutes for the transaction to be processed by Prescreening .
 - Vendor: Review the Reject Notice.
 - Look for error messages for errors related to missing required fields. For example: error messages [593](#) and [594](#).
 - Ignore error messages not related to truncated values.

- Use the Tenprint Transaction Reject Notice and Warning Notice Error Messages document and the ICD to assist in determining the cause of any of the following errors.
 - **If there are errors, do not create and submit a corrected transaction. Coordinate with the TC before submitting another transaction.**
 - **TC:** While the vendor is reviewing the reject notice, review the Prescreening Transaction Report.
 - Look for error messages related to field length. For example: error messages [593](#) and [594](#). Ignore error messages not related to truncated values.
 - Use the View hyperlink to verify that no values were truncated.
 - **TC:** Repeat this process as needed.
- b. APP transaction: Repeat step 3a for an APP transaction.
- c. DOC transaction: Repeat step 3a for a DOC transaction.

This test must be successfully completed before continuing to the next certification test.

4.8 TEST SET 4.8 - TENPRINT TRANSACTIONS TESTS - XX AND UP ANNOTATION IN FIELD 2.084

(CIC: Refer to CIC Ref Guide 4.8)

Objective: Verify the use of the Amputated or Bandaged field.

"A partially amputated finger should be printed and be marked amputated, XX. If the finger's image is missing for any reason, (for example, when the arresting agency did not specify a reason in its submission to the State Identification Bureau) the UP code should be used. This field is used to tell the AFIS which finger positions need to be characterized. The UP code should only be used when the entire image is not provided for fingerprints in the submission. This code will indicate that the AFIS matcher should ignore this image and not include the image in the matching process."

Therefore:

- If a finger is partially amputated and a partial fingerprint (distal) impression can be captured: Capture the impression and also set the annotation 2.084 Amputated or Bandaged Code to 'XX' to indicate a partial amputation.
- If a finger (distal) cannot be captured: Supply only the annotation by setting 2.084 Amputated and Bandaged to 'UP' to indicate that a fingerprint impression cannot be captured (is unprintable).

	Amp/Band Code 2.084 in Type 2 record	Type 4 record with finger image
Finger tip is amputated (part of distal above 1st joint is present)	XX	image
Entire distal above 1st joint is amputated	UP	no record
Distal is unprintable for any other reason (e.g., bandaged)	UP	no record

This test is not testing or assessing the operator interface. The scanning station's operator interface serves as a tool to test the validation of field values.

MCHS Tenprint ICD references:

- A.2.3 Content of each Record Type in a Transaction – Type 2, and 4 Records
- A.6 Annotations for Fingerprint in Field 2.084 and for Palm Prints in Field 15.018

This test will verify that:

- No format or content errors are detected by Prescreening.
- The record is compliant with the FBI EBTS requirements for the use of the Amputated or Bandaged field (as described above).

4.8.1 Test Tools

- For cardscans, tenprint cards with each of the finger position combinations described in the tests (CIC: Refer to CIC Ref Guide 3.2 item 6)
- MCHS Tenprint and Palm Print Certification Test Messages document

4.8.2 Test Steps

Use either an arrest or an applicant transaction in each of the tests. It is not necessary to do this test for more than one type of transaction.

Test 4.8-1 - Designate finger image with partial distal amputation

** Row 1 in table above. **

1. **Vendor with TC observing:** Create a new test transaction:
 - Use TCN 'CERT-<station_id>-Ann
 - Use name Bennet, Jane.
 - Enter any values in only required fields:
 - APP and ARR: Place of Birth, Date of Birth, Sex/Gender, Race, Height, Weight, Eye Color, Hair Color
 - APP: Reason Fingerprinted, Applicant Agency ORI
 - ARR: Date of Arrest, Arrest Type, Arrest Charge Set, Arrest Agency ORI
 - If the test is for a cardscan: Print Agency ORI, Date Printed
 - Enter '<vendor name> Test 4-8-1' in Originating Agency Case Number (OACN).
 - Capture:
 - Ten rolled fingerprints and four plain impressions
 - AND specify a partial amputation for one finger (Amputated or Bandaged Code 'XX')
2. **Vendor with TC observing:** Submit the transaction.
3. Allow 3-5 minutes for the transaction to be processed by Prescreening.
4. **Vendor:** Review the Reject Notice.
 - Look for error messages related to Type 4 records and/or amputated or bandaged code.
 - There should not be any.
 - For example: error messages 517, 519 through 521, 531, 545 through 552, 558, 225 and 651 through 655.
 - Use the Tenprint Transaction Reject Notice and Warning Notice Error Messages document and the ICD to assist in determining the cause of any of the errors in this and subsequent steps in this test.
 - **If there are errors, do not create and submit a corrected transaction. Coordinate with the TC before submitting another transaction.**
5. **TC:** While the vendor is reviewing the reject notice, review the Prescreening Transaction Report: .
 - Look for error messages related to Type 4 records and/or amputated or bandaged code.
 - There should not be any.
 - For example: error messages 517, 519 through 521, 531, 545 through 552, 558, 225 and 651 through 655.
 - Use the View hyperlink to verify that Type 4 records with images for all 14 finger positions are present and, for the partial amputation finger, the Type 2 Amputated or Bandaged field 2.084 contains 'XX'.
 - **Vendor:** If errors are found, make adjustments and go to step 1 to create and submit a new transaction.
6. **Vendor with TC observing:** Create and submit another transaction for this test if requested by test conductor:
 - Use the same TCN but add a LETTER after the last digit
 - Change the first name by adding 'Two', 'Three', etc after the name specified in step 1
 - Use the same OACN '<vendor name> Test 4-8-1'
 - Capture/annotate fingerprints as specified in step 1

Test 4.8-2 - Designate finger image unavailable due to total distal amputation or total lack of friction ridge detail

Rows 2 and 3 in table above. **

1. **Vendor with TC observing:** Create a new test transaction:
 - Use TCN 'CERT-<station_id>-Ann'
 - Use name Bennet, Lizzy.
 - Enter any values in only required fields:
 - APP and ARR: Place of Birth, Date of Birth, Sex/Gender, Race, Height, Weight, Eye Color, Hair Color
 - APP: Reason Fingerprinted, Applicant Agency ORI
 - ARR: Date of Arrest, Arrest Type, Arrest Charge Set, Arrest Agency ORI

- If the test is for a cardscan: Print Agency ORI, Date Printed
 - Enter '<vendor name>Test 4-8-2' in Originating Agency Case Number (OACN).
 - Capture:
 - Nine rolled fingerprints and four plain impressions
 - AND specify one missing finger (Amputated or Bandaged Code 'UP')
2. **Vendor with TC observing:** Submit the transaction.
 3. Allow 3-5 minutes for the transaction to be processed by Prescreening.
 4. **Vendor:** Review the Reject Notice.
 - Look for error messages related to Type 4 records and/or amputated or bandaged code. There should not be any. For example: error messages [517](#), [519 through 521](#), [531](#), [545 through 552](#), [558](#), [225](#) and [651 through 655](#). Use the Tenprint Transaction Reject Notice and Warning Notice Error Messages document and the ICD to assist in determining the cause of any of these errors.
 - **If there are errors, do not create and submit a corrected transaction. Coordinate with the TC before submitting another transaction.**
 5. **TC:** While the vendor is reviewing the reject notice, review the Prescreening Transaction Report.
 - Look for error messages related to Type 4 records and/or amputated or bandaged code.
 - There should not be any.
 - For example: error messages [517](#), [519 through 521](#), [531](#), [545 through 552](#), [558](#), [225](#) and [651 through 655](#).
 - Use the hyperlink to verify that Type 4 records for all 13 finger positions are present, there is no Type 4 record for the missing finger, and, for the missing finger, the Type 2 Amputated or Bandaged field 2.084 contains 'UP'.
 - **Vendor:** If errors are found, make adjustments and go to step 1 to create and submit a new transaction
 6. **Vendor with TC observing:** Create and submit another transaction for this test if requested by test conductor:
 - Use the same TCN but add a LETTER after the last digit
 - Change the first name by adding 'Two', 'Three', etc after the name specified in step 1
 - Use the same OACN '<vendor name> Test 4-8-2'
 - Capture/annotate fingerprints as specified in step 1

Test Group 4.8-3 Try Improper Values in 2.084 Amp/Band Code

There are three tests in this group.

Test 4.8.3-1 - Improper Combination: No finger image and Amp/Band Code 'XX'

1. **Vendor with TC observing:** Create a new test transaction:
 - Use TCN 'CERT-<station_id>-Ann3'
 - Use name Bennet, Mary.
 - Enter any values in only required fields:
 - APP and ARR: Place of Birth, Date of Birth, Sex/Gender, Race, Height, Weight, Eye Color, Hair Color
 - APP: Reason Fingerprinted, Applicant Agency ORI
 - ARR: Date of Arrest, Arrest Type, Arrest Charge Set, Arrest Agency ORI
 - If the test is for a cardscan: Print Agency ORI, Date Printed
 - Enter '<vendor name>Test 4-8-3-1' in Originating Agency Case Number (OACN).
 - Try to capture:
 - Nine rolled fingerprints
 - AND specify one missing finger (Amputated or Bandaged Code 'XX')
2. **Vendor with TC observing:** Try to submit the transaction. This combination of finger impressions and amputated or bandaged code should NOT be allowed by the scanning station.

3. If the transaction is submitted:
 - Allow 3-5 minutes for the transaction to be processed by Prescreening.
 - **Vendor:** Review the Reject Notice.
 - Look for error messages related to Type 4 records and/or amputated or bandaged code, including error messages [558](#).
 - Use the Tenprint Transaction Reject Notice and Warning Notice Error Messages document and the ICD to assist in determining the cause of any of these errors.
 - **If there are errors, do not create and submit a corrected transaction. Coordinate with the TC before submitting another transaction.**
 - **TC:** While the vendor is reviewing the reject notice, review the Prescreening Transaction Report.
 - Look for error messages related to Type 4 records and/or amputated or bandaged code, including error messages [558](#).
 - Use the hyperlink to view the invalid combination.
 - **Vendor:** Make adjustments and go to step 1 to create and submit a new transaction.
4. **Vendor with TC observing:** Create and submit another transaction for this test if requested by test conductor:
 - Use the same TCN but add a LETTER after the last digit
 - Change the first name by adding 'Two', 'Three', etc after the name specified in step 1
 - Use the same OACN '<vendor name> Test 4-8-3-1'
 - Capture/annotate fingerprints as specified in step 1

Test 4.8-3-2 - Improper Combination: Finger image and Amp/Band Code 'UP'

1. **Vendor with TC observing:** Create a new test transaction:
 - Use TCN 'CERT-<station_id>-Ann4'
 - Use name Bennet, Kitty
 - Enter any values in only required fields:
 - APP and ARR: Place of Birth, Date of Birth, Sex/Gender, Race, Height, Weight, Eye Color, Hair Color
 - APP: Reason Fingerprinted, Applicant Agency ORI
 - ARR: Date of Arrest, Arrest Type, Arrest Charge Set, Arrest Agency ORI
 - If the test is for a cardscan: Print Agency ORI, Date Printed
 - Enter '<vendor name>Test 4-8-3-2' in Originating Agency Case Number (OACN).
 - Try to capture:
 - Ten rolled fingerprints
 - AND specify one missing finger (Amputated or Bandaged Code 'UP')
2. **Vendor with TC observing:** Try to submit the transaction. This combination of finger impressions and amputated or bandaged code should NOT be allowed by the scanning station.
3. If the transaction is submitted:
 - Allow 3-5 minutes for the transaction to be processed by Prescreening.
 - **Vendor:** Review the Reject Notice.
 - Look for error messages related to Type 4 records and/or amputated or bandaged code, including error message [519](#).
 - Use the Tenprint Transaction Reject Notice and Warning Notice Error Messages document and the ICD to assist in determining the cause of any of these errors.
 - **If there are errors, do not create and submit a corrected transaction. Coordinate with the TC before submitting another transaction.**
 - **TC:** While the vendor is reviewing the reject notice, review the Prescreening Transaction Report.
 - Look for error messages related to Type 4 records and/or amputated or bandaged code, including error messages [519](#).
 - Use the hyperlink to view the invalid combination.
 - **Vendor:** Make adjustments and go to step 1 to create and submit a new transaction.

4. **Vendor with TC observing:** Create and another transaction for this test if requested by test conductor:
 - Use the same TCN but add a LETTER after the last digit
 - Change the first name by adding 'Two', 'Three', etc after the name specified in step 1
 - Use the same OACN '<vendor name> Test 4-8-3-2'
 - Capture/annotate fingerprints as specified in step 1

Test 4.8.3-3 - Improper Combination: No finger image and no Amp/Band Code

1. **Vendor with TC observing:** Create a new test transaction:
 - Use TCN 'CERT-<station_id>-Ann5'
 - Use name Bennet, Lydia
 - Enter any values in only required fields:
 - APP and ARR: Place of Birth, Date of Birth, Sex/Gender, Race, Height, Weight, Eye Color, Hair Color
 - APP: Reason Fingerprinted, Applicant Agency ORI
 - ARR: Date of Arrest, Arrest Type, Arrest Charge Set, Arrest Agency ORI
 - If the test is for a cardscan: Print Agency ORI, Date Printed
 - Enter '<vendor name>Test 4-8-3-3' in Originating Agency Case Number (OACN)
 - Try to capture:
 - Nine rolled fingerprints
 - AND do not capture an impression for one finger
 - AND do not enter Amputated or Bandaged information for the missing finger
2. **Vendor with TC observing:** Try to submit the transaction. This combination of finger impressions and amputated or bandaged code should NOT be allowed by the scanning station.
3. If the transaction is submitted:
 - Allow 3-5 minutes for the transaction to be processed by Prescreening.
 - **Vendor:** Review the Reject Notice.
 - Look for error messages related to Type 4 records and/or amputated or bandaged code, including error message [520](#).
 - Use the Tenprint Transaction Reject Notice and Warning Notice Error Messages document and the ICD to assist in determining the cause of any of these errors.
 - **If there are errors, do not create and submit a corrected transaction. Coordinate with the TC before submitting another transaction.**
 - **TC:** While the vendor is reviewing the reject notice, review the Prescreening Transaction Report.
 - Look for error messages related to Type 4 records and/or amputated or bandaged code, including error message [520](#).
 - Use the hyperlink to view the invalid combination.
 - **Vendor:** Make adjustments and go to step 1 to create and submit a new transaction.
4. **Vendor with TC observing:** Create and submit another transaction for this test if requested by test conductor:
 - Use the same TCN but add a LETTER after the last digit.
 - Change the first name by adding 'Two', 'Three', etc after the name specified in step 1
 - Use the same OACN '<vendor name> Test 4-8-3-3'
 - Capture/annotate fingerprints as specified in step 1

4.9 TEST 4.9 - FINGERPRINT CAPTURE TEST #1

Test 4.9.1 - Fingerprint Capture Test #1 - Livescan

Objective: Verify ability to accurately and efficiently capture quality fingerprints

This test will verify that:

- Fingerprint scanner is easy for operator to use.
- Quality of the fingerprint images appear to be sufficient for MCHS AFIS and for FBI/NGI (a visual check).

This test does NOT submit transactions to MCHS.

Test Tools

- Multiple individuals from the CIC AFIS group whose fingerprints will be captured

Test Steps

Do the following numerous times with different individuals in the role of subject whose fingerprints are captured.

1. **TC:** Create either ARR or APP transactions entering any values only in required fields.
 - Use TCN 'CERT-<station_id>-Scanner'
 - Required fields:
 - APP and ARR: Place of Birth, Date of Birth, Sex/Gender, Race, Height, Weight, Eye Color, Hair Color
 - APP: Reason Fingerprinted, Applicant Agency ORI
 - ARR: Date of Arrest, Arrest Type, Arrest Charge Set, Arrest Agency ORI
 - Capture rolled fingerprints and plain impressions
2. **TC:** Assess:
 - Usability of the scanner device
 - Quality of the captured prints (a visual check)
3. Do not submit the transaction.

This test must be successfully completed before continuing to the next certification test.

Test 4.9.2 - Fingerprint Capture Test #1 - Cardscan

(CIC: Refer to CIC Ref Guide 4.9)

Objective: Verify ability to accurately and efficiently capture quality fingerprints

This test will verify that:

- Quality of the fingerprint images are of the same quality as the prints on the card (a visual check).

This test does NOT submit transactions to MCHS.

Test Tools

- Tenprint cards with fingerprints of multiple individuals from the CIC AFIS group

Test Steps

Do the following numerous times with fingerprint cards of different individuals.

1. **TC:** Create either ARR or APP transactions entering only required fields.
 - Use TCN 'CERT-<station_id>-Scanner'
 - Required fields:
 - APP and ARR: Place of Birth, Date of Birth, Sex/Gender, Race, Height, Weight, Eye Color, Hair Color, Print Agency ORI, Date Printed

- APP: Reason Fingerprinted, Applicant Agency ORI
 - ARR: Date of Arrest, Arrest Type, Arrest Charge Set, Arrest Agency ORI
 - Scan card
2. **TC:** Assess:
 - Verify that the entire print in the box on the card, and nothing else, is captured
 - Quality of the captured prints (a visual check)
 3. Do not submit the transaction.

4.10 TEST 4.10 - FINGERPRINT CAPTURE TEST #2

(CIC: Refer to CIC Ref Guide 4.10)

Objective: Continue assessment of accurate fingerprint capture.

MCHS Tenprint ICD references:

A.2 Content of each Record Type in a Transaction – Type 4 Record

This test will verify that:

- No errors are detected in the Type 4 fingerprint image records.
- The compression ratio of the images is within a reasonable range of the FBI's target 15:1 ratio.

4.10.1 Test Tools

- For cardscans, tenprint cards with each of the finger position combinations described in the tests (CIC: Refer to CIC Ref Guide 3.2 item 6)
- MCHS Tenprint and Palm Print Certification Test Messages document

4.10.2 Test Steps

1. Finger Position Combinations - Previously submitted test transactions
TC: Check previously entered transactions for error messages: 517, 521, 531, 545 through 552
 - **Vendor:** If errors are found, make adjustments before continuing on to step 2
2. Finger Position Combinations - New test transactions
Create new transactions as specified in a through g below. These cases should not be allowed but full transactions need to be created and submitted if allowed.
 - a. Rolled thumb position but not a plain thumb position.
 - **TC:** Create and ARR or APP transaction.
 - Use TCN 'CERT-<station_id>-<tot>-Try'
 - Enter any values in only required fields:
 - APP and ARR: Name, Place of Birth, Date of Birth, Sex/Gender, Race, Height, Weight, Eye Color, Hair Color
 - APP: Reason Fingerprinted, Applicant Agency ORI
 - ARR: Date of Arrest, Arrest Type, Arrest Charge Set, Arrest Agency ORI
 - If the test is for a cardscan: Print Agency ORI, Date Printed
 - Enter '<vendor name> Test 4-10' in Originating Agency Case Number (OACN).'
 - For a livescan, when capturing rolled and plain prints, try to capture a rolled thumb position but not a plain thumb position
 - For a cardscan, try to indicate that there is a rolled thumb position but not a plain thumb position
 - Try to submit this transaction. This combination of fingerprint impressions should not be allowed by the scanning station.
 - If the transaction is submitted:
 - Allow 3-5 minutes for the transaction to be processed by Prescreening.
 - **Vendor:** Review the Reject Notice.
 - Look for error messages 545 and 549.
 - Use the Tenprint Transaction Reject Notice and Warning Notice Error Messages document and the ICD to assist in determining the cause of any of these errors.
 - **If there are errors, do not create and submit a corrected transaction. Coordinate with the TC before submitting another transaction.**

- **TC:** While the vendor is reviewing the reject notice, review the Prescreening Transaction Report.
 - Look for error messages [545](#) and [549](#). Use the hyperlink to view the invalid combination.
 - Vendor: If errors are found, make adjustments and go to step 1 to create and submit a new transaction.
- **TC:** Repeat this process as needed.
- b. Plain right thumb position but not a rolled thumb position.
 - Repeat step 2a.
- c. Look for error messages [546](#) and [550](#). Four rolled finger positions but not the corresponding plain four fingers position.
 - Repeat step 2a.
- d. Look for error messages [547](#) and [551](#). Plain four fingers position but not the corresponding four rolled finger positions.
 - Repeat step 2a.
 - Look for error messages [548](#) and [552](#).
- e. More than one image for the same finger position. (livescan only)
 - Repeat step 2a.
 - Look for error message [517](#).
- f. Transaction with NO tenprint images.
 - Repeat step 2a.
 - Look for error message [531](#).
- g. Image that is below minimum size. (Livescan only)
 - Repeat step 2a.
 - Look for error message [521](#).
- 3. Compression Ratio of Images
 - a. **TC:** In the Prescreening Transaction Report, look for all occurrences of message [C302](#).
 - This message is used to diagnose image quality problems.
 - If any of the compression ratios is significantly larger or smaller than 15:1, the compression software on the scanning station needs be adjusted.
 - Message C302 is generated only if the compression ratio is less than 10:1 or greater than 20:1, allowing for considerable variance from 15:1.
 - b. **Vendor:** If this message is in the Prescreening Transaction Report, the vendor needs to make adjustment so the compression ratio is within the allowed range.

This test must be successfully completed before continuing to the next certification test.

4.11 TEST 4.11 - FINGERPRINT IMAGE QUALITY AND END-TO-END TEST

(CIC: Refer to CIC Ref Guide 4.11)

Objective: The final step in the verification of the quality of the fingerprint images and an end-to-end test where both a Mississippi rap sheet and an FBI response are returned to the scanning station.

MCHS Tenprint ICD references:

All

This test will verify that:

- The quality of the fingerprint images is sufficient for the MCHS AFIS.
- The quality of the images is sufficient for FBI/NGI.
- The Mississippi rap sheet is printed on the scanning station printer.
- The FBI response is printed on the scanning station printer.

4.11.1 Test Tools

- Multiple individuals from the CIC AFIS group who will play the role of subject
- For livescans, the individuals with the fingerprints (CIC: Refer to CIC Ref Guide 3.2 item 5)
- For cardscans, tenprint cards (CIC: Refer to CIC Ref Guide 3.2 item 6 and 7)
- AFIS examiner for QC review of fingerprint quality
- MCHS Tenprint and Palm Print Certification Test Messages document

4.11.2 Test Steps

This test will submit multiple APP transactions through the MCHS workflow, AFIS and the FBI. Any errors in previous tests must be corrected before doing this test. For each transaction, reenter the Type 2 data and recapture the fingerprints. These transactions will NOT be stored in AFIS at the FBI.

This test requires APP transactions to be submitted. Format the Email Subject Line in accordance with the instructions in the ICD Appendix C. For an APP, the Unique ID Number is the same value as in field 1.08 Applicant Agency ORI.

1. **TC: On MCHS, update the configuration for this test station to allow APPLICANT transactions for this test.**
2. **Vendor with TC observing:** Create a new criminal inquiry applicant test transaction as follows:
 - Create an APP transaction for Reason Fingerprinted CRIMINAL INQUIRY
 - Enter the Type 1 and 2 data as indicated below:
 - Use TCN 'CERT-<station_id>-LE-CIO<xx>' where <xx> is a 2-digit number or a single alphabetic character and the resulting TCN has not previously been submitted.
 - Enter Applicant Agency ORI = 'MSCERT004'.
 - Enter Name as follows:
 - Last Name = 'Testprints'
 - First Name = 'First'
 - Enter '<vendor name> Test 4-11' in Originating Agency Case Number (OACN)
 - Enter any valid value in the following required fields: Place of Birth, Date of Birth, Sex/Gender, Race, Height, Weight, Eye Color, Hair Color
 - If the test is for a cardscan, also enter: Print Agency ORI, Date Printed
 - Capture ten rolled fingerprints and four plain fingerprint positions

If all other fields are valid but one of the above fields does not have the indicated value, Prescreening will not forward the transaction to the MCHS workflow and no response will be sent to the test station.
3. **Vendor with TC observing:** Submit the transaction.
4. Allow 3-5 minutes for the transaction to be processed by Prescreening.

5. **Vendor:** Review the Reject Notice. There should not be any errors detected by Prescreening and therefore there should not be a Reject Notice. **If there are errors, do not create and submit a corrected transaction. Coordinate with the TC before submitting another transaction.**
6. **TC:** While the vendor is reviewing the reject notice, review the Prescreening Transaction Report.
 - There should not be any errors detected by Prescreening.
 - Check the Overall Transaction Status.
 - If it says 'Accepted' go on to the step 7.
 - If it says "Test Transaction" and there are no error messages, this means that there is an error in the values specified in step 2.
 - Vendor: If errors are found, make adjustments and go to step 2 to create and submit a new transaction.
7. Wait for the transaction to be processed by MCHS.
8. **TC:** Use the Workflow Report to determine its status in AFIS.
 - If the 'MCHS Result' line says "No Match Found":
 - Then AFIS was unable to match the captured prints with the prints already on record and the cause of the no match needs to be resolved.
 - If the 'Sent to AFIS' line displays a time but there is no response in the 'Fingerprint Search' line for more than 5 minutes:
 - That should mean that the transaction resulted in multiple AFIS matches that are above the lights out threshold and are considered possible matches. Contact the AFIS examiner to review the transaction.
 - If the submitted prints are of sufficient quality, they should match multiple sets of prints for this subject (which the CIC has already stored in AFIS).
 - The prints will be presented to the AFIS examiner for manual review. The AFIS examiner does the following:
 - Reviews the submitted prints.
 - If they are good quality, the examiner indicates a match on one set of prints (no consolidation) and releases it to MCHS for further processing.
 - If the quality is not good, then they reject the transaction. The vendor will need to resolve the reason that the prints were not acceptable.
9. **TC:** When the AFIS examiner releases the transaction, the status on the Workflow Report will be updated. One of the following will be printed on the scanning station printer:
 - If the prints were acceptable: a Mississippi Rap Sheet and, for arrests, Disposition Forms. This event is recorded on the Workflow Report on the 'MS Rap Sheet Delivered' line.
 - If the prints were not acceptable: a Reject Notice. This event is recorded in the Workflow Report on the 'MCHS Result' line.
 - The transaction is rejected, make adjustments and go to step 2 to create and submit a new transaction.
10. **TC:** If the prints were acceptable, wait for the FBI to send a response.
 - Look for an FBI response on the scanning station's printer. This event is recorded in the Workflow Report on the 'FBI Response Delivered' line with more information on the 'FBI Result' line.
 - The FBI could respond in minutes or in hours.
 - The response will be either an FBI Search Response for APP (SRE) or an FBI Error Response (ERR).
 - Depending on the response, do one of the following.
 - If an FBI Error Response (ERR) is received and the error is not related to the image:
 - Make adjustments and go to step 2 to create and submit a new transaction.
 - If an FBI Error Response (ERR) is received and the error is related to the image, the message may provide sufficient information for the vendor to understand the complaint and make the

necessary corrections. Otherwise, contact the FBI and ask them to look at the image. Provide the FBI with the date and approximate time of the submission to the FBI (the closest approximation is the 'EFTS Transaction Sent' time found in the Workflow report), the name, and the archive id (which will be the TCN of the EFTS transaction).

- If the transaction is rejected by the FBI:
 - make adjustments and go to step 2 to create and submit a new transaction.

11. **Vendor with TC observing:** Create and submit new transactions with new fingerprints. TCIC will provide different individuals in the role of subject whose fingerprints are captured. To distinguish between test transactions (vs. resubmission of a transaction), do the following:

- Use the same TCN but increase <xx> by one
- Change the name to 'Second', 'Third', etc
- Use the same Type 2 data
- Use the same OACN '<vendor name> Test 4-11'
- Capture all fingerprints

This test must be successfully completed before continuing to the next certification test.

4.12 TEST 4.12 - SUPPORT FUNCTION TESTS – STORE & RESUBMIT TRANSACTIONS; PRINT CARDS

(CIC: Refer to CIC Ref Guide 4.12)

Objective: Verify that transactions can be stored, resubmitted and, for livescans, properly print Mississippi State Arrest and FBI Applicant cards.

MCHS Tenprint ICD references:

- 9.0 Print Tenprint and Palm Print Card Requirements
- 10.0 Store, Retrieve and Resubmit Transactions Requirements

This test will verify that:

- A tenprint transaction can be stored and subsequently modified and resubmitted.
- A livescan can print a tenprint card on 8 1/2 x 11 paper and on preprinted card stock from either a stored or a new transaction.

4.12.1 Test Tools

- Blank arrest cards (CIC: Refer to CIC Ref Guide 3.2 item 11)
- Blank applicant cards (CIC: Refer to CIC Ref Guide 3.2 item 11)

4.12.2 Test Steps

4.12.2.1 Part 1 - Transactions stored and resubmitted

1. **Vendor with TC observing:** Demonstrate that all of the transactions submitted in Test 4.6 are stored in the scanning station.
2. **Vendor with TC observing:**
 - Select one of the transactions used in Test 4.6
 - Change the value of some fields
 - Resubmit the transaction
3. Allow 3-5 minutes for the transaction to be processed by Prescreening.
4. **TC:** Review the Prescreening Transaction Report.
 - Use the hyperlink to verify that the changed values are in the transaction

4.12.2.2 Part 2 - Livescan prints State Arrest card and FBI Applicant card

1. Applicant card on 8 1/2 x 11 paper (from stored transaction)
 - a. **Vendor with TC observing:** Select a stored ARR transaction from Test 4.6. Enter the data, capture the prints, and print a tenprint card (both sides) on 8 1/2 x 11 paper.
 - b. **TC:** Verify the format of the printed image of a card: "print the fingerprint images and demographic data on 8 1/2 x 11 paper using an imbedded template such that the image and data formats appear on the paper to look like the FBI Applicant Card".
 - c. **TC:** Verify the contents of the printed applicant card.
 - d. **TC:** Verify that the prints and data that are entered for printing cannot be submitted to MCHS unless the operator specifically requests this.
 - e. **TC:** Look at the Prescreening Transaction Report to verify that the transaction was not submitted.
2. Arrest card on 8 1/2 x 11 paper (from stored transaction)
 - Repeat step 1 for a State Arrest card: "print the fingerprint images and demographic data on 8 1/2 x 11 paper using an imbedded template such that the image and data formats appear on the paper to look like the current Mississippi Criminal Arrest Card".

3. Applicant card on preprinted card stock (new transaction)
 - a. **Vendor with TC observing:** Enter an APP transaction from Test 4.6. Enter the data, capture the prints, and print an FBI Applicant card (both sides).
 - b. **TC:** Verify that all data is correctly positioned on the FBI Applicant Card.
 - c. **TC:** Verify the contents of the printed applicant card.
 - d. **TC:** Verify that the prints and data that are entered for printing cannot be submitted to MCHS unless the operator specifically requests this.
 - e. **TC:** Look at the Prescreening Transaction Report to verify that the transaction was not submitted.
4. Arrest card on preprinted card stock (new transaction)
 - Repeat step 3 for a State Arrest card.

This test must be successfully completed before tenprint certification testing is complete and before continuing on to palm print certification testing.

4.13 PALM PRINT CERTIFICATION

This document includes tests for Type 1, 2, 4 and 10 records in a tenprint transaction. Tests for Type 15 palm print records are in a separate document.

If certification of Type 15 palm prints is done at the same time as tenprint certification:

- The tenprint certification must be done first using instructions in this document.
- Then the palm print evaluation can be done using instructions in the palm print certification test document. The requirements for configuring the environment, downloading edit tables and ATN tables, test transaction content, etc. are different and must be followed exactly.

If palm prints are being certified:

- Follow the instructions and tests in MCHS Palm Print Scanning Certification Test Procedures.
- Notify the MCHS Support to do the configuration settings for palm print certification tests.
- The vendor will need to change some configurations for palm print certification tests as indicated in the palm print certification test document.

4.14 RESET CONFIGURATIONS WHEN TENPRINT CERTIFICATIONS TESTS ARE CONCLUDED

The following can be done after the vendor departs:

- CIC notifies MSHC Support that the tests are concluded.
- MCHS Support resets configurations. (CIC: Refer to CIC Ref Guide)
 - And, if applicable, sets configurations for palm print certification tests

5.0 WHEN THE VENDOR'S TENPRINT CAPABILITY HAS BEEN CERTIFIED

A certification decision will be made a few days after the certification tests are completed.

If the certification is given to the vendor, the CIC reviews the requirements for installations at local agencies with the vendor:

- The Installation Checklist in Tenprint ICD section 5.2 must be followed for each installation of a production scanning station. Make sure the vendor understands that they MUST coordinate with their customer and the CIC as indicated in the checklist.

Also remind the vendor of the following:

- Scanning station ids, IP addresses, operator ids, print agency, and agency ORIs assigned in section 4.1 are for certification tests only and must be changed to meet individual agency production environment requirements.
- The edit tables are for certification tests only and are not complete. Do NOT install on production equipment - the scanning stations must receive the production Edit Table Download Message from MCHS at the time of installation.
- ATN blocks are for certification tests only. Do NOT install in production scanning stations - the scanning stations must receive the ATN Block Message with their assigned ATN blocks from MCHS at the time of installation.
- To prevent transactions from being rejected, it is essential that the scanning station perform all of the validations listed in the ICD before sending them to MCHS. After installation of each scanning station, the CIC will monitor the transactions and will contact the vendor if problems are detected.

6.0 APPENDIX A EMAIL SUBJECT LINE

Tests that submit APPs:

Format the Email Subject Line in accordance with the instructions in the ICD Appendix C. For an APP, the Unique ID Number is the same value as in field 1.08.

Tests that submit ARRs:

Format the Email Subject Line in accordance with the instructions in the ICD Appendix C. For an ARR, the Unique ID Number is the same value as in field 2.701 Arrest Tracking Number.

Tests that submit DOCs:

Format the Email Subject Line in accordance with the instructions in the ICD Appendix C. For a DOC, the Unique ID Number is the same value as in field 2.709 DOC Number.

7.0 APPENDIX B CERTIFICATION TEST TRANSACTIONS FOR TEST 4.6

Type 1 field values used for certification testing:

1.07 Print Agency:

- For livescans - Hardcoded - always MSCERT004
- For cardscans - User-entered as indicated in the individual test transactions

1.08 Arrest/Applicant/DOC Agency ORI:

- For Arrests, Generated from field 2.702
- For Applicants and DOCs, user-entered as indicated in the individual test transactions

1.09 Transaction Control Number: Special CERT format as described in ICD section 6.0

- User-entered special format as indicated in the individual certification test transactions

1.10 Transaction Control Reference Number:

- Either user-entered as indicated in the individual test transactions or automatically determined by scanning station software - applies to the No Charge Applicant Resubmits transaction only

Also, note the following information from the Tenprint ICD:

Field 1.07 Print Agency ORI: As described in the Tenprint ICD Appendix A.1.

- On a livescan, the fingerprints and palm prints are recorded directly on the scanning station, and thus the source of the prints is always the agency that owns the livescan. This value never changes and must be hardcoded (agency specific).
- A cardscan, however, can be used to scan tenprint and palm print cards from any agency. In this case, the print agency is the agency where the prints were recorded on the card. Therefore, on a cardscan, the print agency must be user entered. The values specified for 1.07 Print Agency in the following certification test transactions apply only to cardscans.

Field 1.08 Arrest/Applicant/DOC Agency ORI: As described in the Tenprint ICD Appendix A.1.

- This is the agency that made the arrest or requested the background check. It may or may not be the same as the Print Agency.

Field 2.037 Reason Fingerprinted: As described in the Tenprint ICD section 4.1.

- For Law Enforcement Applicant, Criminal Inquiry, Instate Inquiry Only, and APP for SOR transactions, **the Reason Fingerprinted is never to be user entered**. Each of these is a different type of submission and must be handled separately. Therefore, the Reason Fingerprinted is to be hardcoded and not entered by the user.

Field 2.038 Date Printed: As described in the Tenprint ICD Appendix A.2.

- On a livescan, this field is generated by the livescan software using the system date of the date the prints were captured. The date printed must not be user entered.
- On a cardscan, for all types of Applicant transactions, this field must be user entered. The date must be user entered.
- On a cardscan, for Arrests, this field is populated from 2.045 Date of Arrest.

Field 2.701 Arrest Tracking Number: As described in the Tenprint ICD Appendix A.2.

- On a livescan, the ATN is assigned by the livescan software, using the ATN Blocks that were downloaded from MCHS. The ATN must not be user entered.
- On a cardscan, the ATN is preprinted on the fingerprint card and must be user entered.

7.1 B.1 LAW ENFORCEMENT AGENCY TRANSACTIONS

Data for test transactions are specified on the following pages.

In these sample transactions, occurrences in a repeating field are numbered beginning with (0) going through (n). However, if occurrences in a repeating field have errors, they appear in the Reject Notice as occurrences (OCC) 1 through n+1.

7.1.1 CERT-<station_id>-LE-Arrest1

Read the first page of Appendix B before entering this ARR transaction.

CERT-<station_id>-LE-Arrest1 Field	Value
Type 1 Record:	
1.07 Print Agency ORI	Cardscan: MSCERT003 This field is user entered ONLY IF the certification is for a cardscan. Livescan: NOT user entered. Hardcoded value as indicated in introduction to Appendix B.
1.09 Transaction Control No	CERT-<station_id>-LE-Arrest1
Type 2 Record:	
2.009 Originating Agency Case #	<as specified in individual test>
2.016 Social Security # (0)	123456788
2.017 Miscellaneous Id #	-
Misc Id # Type (0)	Natl Agency Nr
Misc Id # Value (0)	12-X45
Misc Id # Type (1)	Passport Nr
Misc Id # Value (1)	123456789012
2.018 Name	-
Last Name (0)	Potter
First Name (0)	Harold
Middle Name (0)	Albert
Name Suffix (0)	JR
Last Name (1)	Hippopotamus-Giraffe
First Name (1)	Harold
Middle Name (1)	Albert
Name Suffix (1)	(no data)
2.020 Place of Birth	YY

CERT-<station_id>-LE-Arrest1 Field	Value
2.021 Country of Citizenship	EN
2.022 Date of Birth (0)	19800831
2.024 Sex/Gender	Male
2.025 Race	White
2.026 Scars, Marks, and Tattoos	-
SMT Code (0)	SC FHD
SMT Description (0)	(no data)
SMT Code (1)	TAT UL ARM
SMT Description (1)	Owl
2.027 Height	507
2.029 Weight	130
2.031 Eye Color	Hazel
2.032 Hair Color	Brown
2.035 Palm Prints Available	Yes
2.036 Photo Available	No
2.038 Date Printed	Cardscan: 20170405 This field is user entered ONLY IF the certification is for a cardscan. Livescan: NOT user entered.
2.039 Employment	-
Occupation	Construction
Employer Name	Reynolds Corp.
Employer Address 1	Division 1A
Employer Address 2	Suite 45
Employer Address 3	Riverville, MS 22222
2.041 Residence	-

CERT-<station_id>-LE-Arrest1 Field	Value
Residence Address 1	200 Side Street
Residence Address 2	Apt. 40
Residence Address 3	Riverville, MS 22225
2.045 Date of Arrest	20170405
2.056 Caution Comments	Uses a Nimbus 2000 broomstick
2.701 Arrest Tracking #	<p>Cardscan: 9000040000</p> <p>Enter THIS ATN, do NOT enter the ATN on test tenprint card. This field is user entered ONLY IF the certification is for a cardscan.</p> <p>Livescan: Assigned by livescan from downloaded ATN Block.</p>
2.702 Arrest Agency ORI	MSCERTAR2
2.703 Drivers License	-
Driver's License State (0)	MS
Driver's License # (0)	111-333-666
Driver's License State (1)	AK
Driver's License # (1)	222-333-666
2.704 Arrest Type	Adult
2.705 Arrest Charge Set	-
Citation (0)	49-7-31.1
Charge Description (0)	Hunting without an orange vest
Supplement (0)	Conspiracy, Abet
Severity (0)	Misdemeanor
# Counts (0)	2
Date of Offense (0)	20170401
Action (0)	Arrest Charge

CERT-<station_id>-LE-Arrest1 Field	Value
Charge Remarks (0)	No shirt either
Citation (1)	97-19-21(2)
Charge Description (1)	Hunting without a gun
Supplement (1)	(no data)
Severity (1)	Misdemeanor
# Counts (1)	4
Date of Offense (1)	20170402
Action (1)	Indictment charge
Charge Remarks (1)	(no data)
Type 10 Record:	Livescan only
10.026 Subject Facial Description	for SAP less than 40, do not fill out. For SAP 40 and above, enter NEUTRAL for one of the values. Other values for this field may additionally be added.

7.1.2 CERT-<station_id>-LE-Arrest2

Read the first page of Appendix B before entering this ARR transaction.

CERT-<station_id>-LE-Arrest2 Field	Value
Type 1 Record:	
1.07 Print Agency ORI	Cardscan: MSCERT004 This field is user entered ONLY IF the certification is for a cardscan. Livescan: NOT user entered. Hardcoded value as indicated in introduction to Appendix B.
1.09 Transaction Control No	CERT-<station_id>-LE-Arrest2
Type 2 Record:	
2.009 Originating Agency Case #	<as specified in individual test>
2.016 Social Security # (0)	123456450
Social Security # (1)	222456789
2.017 Miscellaneous Id #	-
Misc Id # Type (0)	Natl Agency Nr
Misc Id # Value (0)	12-X4530
2.018 Name	-
Last Name (0)	Bond
First Name (0)	James
Middle Name (0)	Earl
Name Suffix (0)	SR
2.020 Place of Birth	NZ
2.021 Country of Citizenship	EN
2.022 Date of Birth (0)	19800831
Date of Birth (1)	19791130
Date of Birth (2)	19790620
2.024 Sex/Gender	Male

CERT-<station_id>-LE-Arrest2 Field	Value
2.025 Race	Black
2.026 Scars, Marks, and Tattoos	-
SMT Code (0)	SC FHD
SMT Description (0)	Lightning Bolt
2.027 Height	511
2.029 Weight	230
2.031 Eye Color	Hazel
2.032 Hair Color	Black
2.035 Palm Prints Available	Yes
2.036 Photo Available	No
2.038 Date Printed	Cardscan: 20170415 Enter THIS ATN, do NOT enter the ATN on test tenprint card. This field is user entered ONLY IF the certification is for a cardscan. Livescan: Assigned by livescan from downloaded ATN Block.
2.039 Employment	-
Occupation	Food Server
Employer Name	ABC Restaurant
Employer Address 1	Brookville, MS
Employer Address 2	(no data)
Employer Address 3	(no data)
2.041 Residence	-
Residence Address 1	7250 Side Street
Residence Address 2	(no data)
Residence Address 3	Riverville, MS 22225
2.045 Date of Arrest	20170405

CERT-<station_id>-LE-Arrest2 Field	Value
2.056 Caution Comments	Uses a Nimbus 2000 broomstick
2.701 Arrest Tracking #	<p>Cardscan: 9000040019</p> <p>Enter THIS ATN, do NOT enter the ATN on the test card.</p> <p>This field is user entered ONLY IF the certification is for a cardscan.</p> <p>Livescan: Assigned by livescan from downloaded ATN Block.</p>
2.702 Arrest Agency ORI	MSCERTAR1
2.703 Drivers License	-
Driver's License State (0)	MS
Driver's License # (0)	111-333-666
2.704 Arrest Type	Adult
2.705 Arrest Charge Set	-
Citation (0)	97-19-19
Charge Description (0)	Hunting without a hat
Supplement (0)	Abet
Severity (0)	Misdemeanor
# Counts (0)	2
Date of Offense (0)	20170401
Action (0)	Arrest charge
Charge Remarks (0)	Remark for Charge 1
Type 10 Record:	Livescan only
10.026 Subject Facial Description	for SAP less than 40, do not fill out. For SAP 40 and above, enter NEUTRAL for one of the values. Other values for this field may additionally be added.

7.1.3 CERT-<station_id>-LE-LEApp1

Read the first page of Appendix B before entering this APP transaction.

CERT-<station_id>-LE-LEApp1 Field	Value
Type 1 Record:	
1.07 Print Agency ORI	Cardscan: MSCERT003 This field is user entered ONLY IF the certification is for a cardscan. Livescan: NOT user entered. Hardcoded value as indicated in introduction to Appendix B.
1.08 Applicant Agency ORI	MSCERT001
1.09 Transaction Control No	CERT-<station_id>-LE-LEApp1
Type 2 Record:	
2.009 Originating Agency Case #	<as specified in individual test>
2.016 Social Security # (0)	222222222
2.017 Miscellaneous Id #	-
Misc Id # Type (0)	Natl Agency Nr
Misc Id # Value (0)	12-X2234
Misc Id # Type (1)	Passport Nr
Misc Id # Value (1)	555777
2.018 Name	-
Last Name (0)	Vader
First Name (0)	Darth
Middle Name (0)	Luke
Name Suffix (0)	III
Last Name (1)	James Earl
First Name (1)	X
Middle Name (1)	(no data)
Name Suffix (1)	(no data)

CERT-<station_id>-LE-LEApp1 Field	Value
2.020 Place of Birth	LA
2.021 Country of Citizenship	US
2.022 Date of Birth (0)	19850505
Date of Birth (1)	19460606
2.024 Sex/Gender	Male
2.205 Race	White
2.026 Scars, Marks, and Tattoos	-
SMT Code (0)	TAT UP LIP
SMT Description (0)	Helmet
SMT Code (1)	TAT UL ARM
SMT Description (1)	Owl
2.027 Height	604
2.029 Weight	250
2.031 Eye Color	Unknown
2.032 Hair Color	Black
2.038 Date Printed	Cardscan: 20170615 This field is user entered ONLY IF the certification is for a cardscan. Livescan: NOT user entered.
2.039 Employment	-
Occupation	Construction Supervisor
Employer Name	(no data)
Employer Address 1	5566 Long St, Walnut, MS
Employer Address 2	(no data)
Employer Address 3	(no data)
2.041 Residence	-

CERT-<station_id>-LE-LEApp1 Field	Value
Residence Address 1	200 Side Street
Residence Address 2	Jupiter, MS
Residence Address 3	(no data)
2.703 Drivers License	-
Driver's License State (0)	MS
Driver's License # (0)	666-666-666
Driver's License State (1)	AK
Driver's License # (1)	AK-222222
2.707 Response Address	-
Response Addressee	Han Solo Inc.
Response Address 1	P.O. C3
Response Address 2	(no data)
Response Address 3	Enterprise, VA 44444
Response Phone #	222-111-4444

7.1.4 CERT-<station_id>-LE-CIO1

Read the first page of Appendix B before entering this APP transaction.
 In the Transaction Control Number, the 'O' in CIO is the letter 'O', it is not a zero (0).

CERT-<station_id>-LE-CIO1 Field	Value
Type 1 Record:	
1.07 Print Agency ORI	Cardscan: MSCERT004 This field is user entered ONLY IF the certification is for a cardscan. Livescan: NOT user entered. Hardcoded value as indicated in introduction to Appendix B.
1.08 Applicant Agency ORI	MSCERT002
1.09 Transaction Control No	CERT-<station_id>-LE-CIO1
Type 2 Record:	
2.009 Originating Agency Case #	<as specified in individual test>
2.016 Social Security # (0)	123456777
Social Security # (1)	222456999
2.017 Miscellaneous Id #	-
Misc Id # Type (0)	Natl Agency Nr
Misc Id # Value (0)	12-X45
2.018 Name	-
Last Name (0)	Bond
First Name (0)	Sally
Middle Name (0)	A
Name Suffix (0)	IV
Last Name (1)	Double O Seven
First Name (1)	X
Middle Name (1)	(no data)
Name Suffix (1)	(no data)

CERT-<station_id>-LE-CIO1 Field	Value
2.020 Place of Birth	YY
2.021 Country of Citizenship	ZR
2.022 Date of Birth (0)	19800831
2.024 Sex/Gender	Male
2.025 Race	Asian
2.026 Scars, Marks, and Tattoos	-
SMT Code (0)	SC FHD
SMT Description (0)	(no data)
SMT Code (1)	TAT UL ARM
SMT Description (1)	(no data)
2.027 Height	604
2.029 Weight	300
2.031 Eye Color	Black
2.032 Hair Color	Unknown
2.037 Reason Fingerprinted	<set to CRIMINAL INQUIRY by scanning station based on type of submission>
2.038 Date Printed	Cardscan: 20170715 This field is user entered ONLY IF the certification is for a cardscan. Livescan: NOT user entered.
2.039 Employment	-
Occupation	(no data)
Employer Name	Reynolds Corp.
Employer Address 1	Suite 453
Employer Address 2	9841 Main St
Employer Address 3	Riverville, MS 22222
2.041 Residence	-

CERT-<station_id>-LE-CIO1 Field	Value
Residence Address 1	200 Side Street
Residence Address 2	Apt 825
Residence Address 3	Riverville, MS 22225
2.703 Drivers License	-
Driver's License State (0)	MS
Driver's License # (0)	111-333-666
Driver's License State (1)	AK
Driver's License # (1)	222-333-666
2.707 Response Address	-
Response Addressee	M Inc.
Response Address 1	HQ
Response Address 2	(no data)
Response Address 3	London, VA 44444
Response Phone #	007-999-9999

7.1.5 CERT-<station_id>-LE-APPforSOR1

Read the first page of Appendix B before entering this APP transaction.

CERT-<station_id>-LE-APPforSOR1 Field	Value
Type 1 Record:	
1.07 Print Agency ORI	Cardscan: MSCERT004 This field is user entered ONLY IF the certification is for a cardscan. Livescan: NOT user entered. Hardcoded value as indicated in introduction to Appendix B.
1.08 Applicant Agency ORI	MSCERT002
1.09 Transaction Control No	CERT-<station_id>-LE-APPforSOR1
Type 2 Record:	
2.009 Originating Agency Case #	<as specified in individual test>
2.016 Social Security # (0)	123456788
2.017 Miscellaneous Id #	-
Misc Id # Type (0)	Natl Agency Nr
Misc Id # Value (0)	12-W234
2.018 Name	-
Last Name (0)	Bond
First Name (0)	Robert
Middle Name (0)	Albert
Name Suffix (0)	IV
Last Name (1)	Double O Seven
First Name (1)	X
Middle Name (1)	(no data)
Name Suffix (1)	(no data)
2.020 Place of Birth	AZ
2.021 Country of Citizenship	EN

CERT-<station_id>-LE-APPforSOR1 Field	Value
2.022 Date of Birth (0)	19800831
Date of Birth (1)	19791130
2.024 Sex/Gender	Male
2.025 Race	White
2.026 Scars, Marks, and Tattoos	–
SMT Code (0)	SC ABDOM
SMT Description (0)	(no data)
SMT Code (1)	TAT UP LIP
SMT Description (1)	Owl
2.027 Height	608
2.029 Weight	250
2.031 Eye Color	Black
2.032 Hair Color	White
2.037 Reason Fingerprinted	<set to Sex Offender Reg by scanning station based on type of submission>
2.038 Date Printed	Cardscan: 20170703 This field is user entered ONLY IF the certification is for a cardscan. Livescan: NOT user entered.
2.039 Employment	–
Occupation	Construction
Employer Name	(no data)
Employer Address 1	(no data)
Employer Address 2	(no data)
Employer Address 3	(no data)
2.041 Residence	–
Residence Address 1	200 Side Street

CERT-<station_id>-LE-APPforSOR1 Field	Value
Residence Address 2	Unit 643
Residence Address 3	Riverville, MS 22225
2.703 Drivers License	-
Driver's License State (0)	MS
Driver's License # (0)	111-333-666
Driver's License State (1)	AK
Driver's License # (1)	222-333-666
2.707 Response Address	-
Response Addressee	M Inc.
Response Address 1	HQ
Response Address 2	(no data)
Response Address 3	London, VA 44444
Response Phone #	007-999-9999

7.1.6 CERT-<station_id>-LE-Arrest3


Read the first page of Appendix B before entering this ARR transaction.

CERT-<station_id>-LE-Arrest3 Field	Value
Type 1 Record:	
1.07 Print Agency ORI	Cardscan: MSCERT003 This field is user entered ONLY IF the certification is for a cardscan. Livescan: NOT user entered. Hardcoded value as indicated in introduction to Appendix B.
1.09 Transaction Control No	CERT-<station_id>-LE-Arrest3
Type 2 Record:	
2.009 Originating Agency Case #	<as specified in individual test>
2.018 Name	-
Last Name (0)	Baggins
First Name (0)	Bilbo
Middle Name (0)	(no data)
Name Suffix (0)	(no data)
2.020 Place of Birth	US
2.022 Date of Birth (0)	19800831
2.024 Sex/Gender	Female
2.025 Race	Other
2.031 Eye Color	Hazel
2.032 Hair Color	Black
2.035 Palm Prints Available	Yes
2.036 Photo Available	No
2.038 Date Printed	Cardscan: 20170405 This field is user entered ONLY IF the certification is for a cardscan. Livescan: NOT user entered.
2.045 Date of Arrest	20170405

CERT-<station_id>-LE-Arrest3 Field	Value
2.701 Arrest Tracking #	Cardscan: 9000040027 Enter THIS ATN, do NOT enter the ATN on test tenprint card. This field is user entered ONLY IF the certification is for a cardscan. Livescan: Assigned by livescan from downloaded ATN Block.
2.702 Arrest Agency ORI	MSCERTAR1
2.704 Arrest Type	Adult
2.705 Arrest Charge Set	-
Citation (0)	97-19-21
Charge Description (0)	(no data)
Supplement (0)	(no data)
Severity (0)	Misdemeanor
# Counts (0)	2
Date of Offense (0)	20120401
Action (0)	Arrest charge
Charge Remarks (0)	(no data)
Type 10 Record:	Livescan only
10.026 Subject Facial Description	for SAP less than 40, do not fill out. For SAP 40 and above, enter NEUTRAL for one of the values. Other values for this field may additionally be added.

7.2 B.2 CIVIL APPLICANT AGENCY TRANSACTIONS

Data for test transactions are specified on the following pages.

In these sample transactions, occurrences in a repeating field are numbered beginning with (0) going through . However, if occurrences in a repeating field have errors, they appear in the Reject Notice as occurrences (OCC) 1 through n+1.

7.2.1 CERT-<station_id>-CA-BillableApp1

Read the first page of Appendix B before entering this APP transaction.

CERT-<station_id>-CA-BillableApp1 Field	Value
Type 1 Record:	
1.07 Print Agency ORI	Cardscan: MSCERT003 This field is user entered ONLY IF the certification is for a cardscan. Livescan: NOT user entered. Hardcoded value as indicated in introduction to Appendix B.
1.08 Applicant Agency ORI	MSCERT002
1.09 Transaction Control No	CERT-<station_id>-CA-BillableApp1
Type 2 Record:	
2.009 Originating Agency Case #	<as specified in individual test>
2.016 Social Security # (0)	222222222
Social Security # (1)	333333333
2.017 Miscellaneous Id #	-
Misc Id # Type (0)	Natl Agency Nr
Misc Id # Value (0)	12-X2230
Misc Id # Type (1)	Passport Nr
Misc Id # Value (1)	88555
2.018 Name	-
Last Name (0)	Vader
First Name (0)	Raymond
Middle Name (0)	Luke
Name Suffix (0)	III
Last Name (1)	Jimmy Earl
First Name (1)	X

CERT-<station_id>-CA-BillableApp1 Field	Value
Middle Name (1)	(no data)
Name Suffix (1)	(no data)
2.020 Place of Birth	LA
2.021 Country of Citizenship	GN
2.022 Date of Birth (0)	19850505
Date of Birth (1)	19460606
2.024 Sex/Gender	Male
2.205 Race	White
2.026 Scars, Marks, and Tattoos	-
SMT Code (0)	TAT UP LIP
SMT Description (0)	Helmet
SMT Code (1)	TAT UL ARM
SMT Description (1)	Owl
2.027 Height	604
2.029 Weight	250
2.031 Eye Color	Gray
2.032 Hair Color	Black
2.037 Reason Fingerprinted	Men Hth Vol 41-4-7
2.038 Date Printed	Cardscan: 20170603 This field is user entered ONLY IF the certification is for a cardscan. Livescan: NOT user entered.
2.039 Employment	-
Occupation	Civil Engineer
Employer Name	Builders Depot

CERT-<station_id>-CA-BillableApp1 Field	Value
Employer Address 1	825 Riverview Suite 204
Employer Address 2	Llvingston, GA
Employer Address 3	25012
2.041 Residence	-
Residence Address 1	200 Side Street
Residence Address 2	(no data)
Residence Address 3	Riverville, MS 22225
2.703 Drivers License	-
Driver's License State (0)	MS
Driver's License # (0)	666-666-666
Driver's License State (1)	AK
Driver's License # (1)	AK-222222
2.706 Fee Paid	35.99
2.707 Response Address	-
Response Addressee	Han Solo Inc.
Response Address 1	P.O. C3
Response Address 2	(no data)
Response Address 3	Enterprise, VA 44444
Response Phone #	222-111-4444

7.2.2 CERT-<station_id>-CA-NoChargeApp1

Read the first page of Appendix B before entering this APP transaction.

CERT-<station_id>-CA-NoChargeApp1 Field	Value
Type 1 Record:	
1.07 Print Agency ORI	Cardscan: MSCERT004 This field is user entered ONLY IF the certification is for a cardscan. Livescan: NOT user entered. Hardcoded value as indicated in introduction to Appendix B.
1.08 Applicant Agency ORI	MSCERT002
1.09 Transaction Control No	CERT-<station_id>-CA-NoChargeApp1
1.10 Transaction Control Ref No	REF-NO-890123456789
Type 2 Record:	
2.009 Originating Agency Case #	<as specified in individual test>
2.016 Social Security # (0)	123456341
2.017 Miscellaneous Id #	-
Misc Id # Type (0)	Natl Agency Nr
Misc Id # Value (0)	12-7896
2.018 Name	-
Last Name (0)	Bond
First Name (0)	Henry
Middle Name (0)	Albert
Name Suffix (0)	IV
2.020 Place of Birth	XX
2.021 Country of Citizenship	EN
2.022 Date of Birth (0)	19800831
Date of Birth (1)	19791130

CERT-<station_id>-CA-NoChargeApp1 Field	Value
2.024 Sex/Gender	Male
2.025 Race	Amerind
2.027 Height	604
2.029 Weight	250
2.031 Eye Color	Black
2.032 Hair Color	Black
2.037 Reason Fingerprinted	Liquor App 67-1-57
2.038 Date Printed	Cardscan: 20170704 This field is user entered ONLY IF the certification is for a cardscan. Livescan: NOT user entered.
2.039 Employment	-
Occupation	Construction
Employer Name	(no data)
Employer Address 1	(no data)
Employer Address 2	Suite 45
Employer Address 3	Riverville, MS 22222
2.041 Residence	-
Residence Address 1	(no data)
Residence Address 2	999 Main St.
Residence Address 3	Riverville, MS 22225
2.703 Drivers License	-
Driver's License State (0)	MS
Driver's License # (0)	111-333-666
Driver's License State (1)	AK

CERT-<station_id>-CA-NoChargeApp1 Field	Value
Driver's License # (1)	222-333-666
2.707 Response Address	-
Response Addressee	M Inc.
Response Address 1	HQ
Response Address 2	(no data)
Response Address 3	London, VA 44444
Response Phone #	007-999-9999

7.2.3 CERT-<station_id>-CA-BillableApp2

Read the first page of Appendix B before entering this APP transaction.

CERT-<station_id>-CA-BillableApp2 Field	Value
Type 1 Record:	
1.07 Print Agency ORI	Cardscan: MSCERT003 This field is user entered ONLY IF the certification is for a cardscan. Livescan: NOT user entered. Hardcoded value as indicated in introduction to Appendix B.
1.08 Applicant Agency ORI	MSCERT001
1.09 Transaction Control No	CERT-<station_id>-CA-BillableApp2
Type 2 Record:	
2.009 Originating Agency Case #	<as specified in individual test>
2.018 Name	-
Last Name (0)	Baggins
First Name (0)	Bobby
Middle Name (0)	(no data)
Name Suffix (0)	(no data)
2.020 Place of Birth	NZ
2.022 Date of Birth (0)	19800831
2.024 Sex/Gender	Male
2.025 Race	White
2.031 Eye Color	Hazel
2.032 Hair Color	Black
2.037 Reason Fingerprinted	Sec Firearm 97-37-7
2.038 Date Printed	Cardscan: 20170705 This field is user entered ONLY IF the certification is for a cardscan. Livescan: NOT user entered.

7.2.4 B.3 Department of Corrections Transactions (Livescan Only)

Data for test transactions are specified on the following pages.

In these sample transactions, occurrences in a repeating field are numbered beginning with 0 going through n. However, if occurrences in a repeating field have errors, they appear in the Reject Notice as occurrences (OCC) 1 through n+1.

7.2.5 CERT-<station_id>-DOC-Intake 1

Read the first page of Appendix B before entering this DOC transaction.

CERT-<station_id>-DOC-Intake1 Field	Value
Type 1 Record:	
1.07 Print Agency ORI	Livescan: NOT user entered. Hardcoded value as indicated in introduction to Appendix B.
1.08 DOC Agency ORI	MSCERTDOC
1.09 Transaction Control No	CERT-<station_id>-DOC-Intake1
Type 2 Record:	
2.016 Social Security # (0)	123456555
Social Security # (1)	222456999
2.017 Miscellaneous Id #	-
Misc Id # Type (0)	Natl Agency Nr
Misc Id # Value (0)	12-X45
Misc Id # Type (1)	Passport Nr
Misc Id # Value (1)	123456789012
2.018 Name	-
Last Name (0)	Potter
First Name (0)	Jason
Middle Name (0)	Albert
Name Suffix (0)	JR
Last Name (1)	Giraffe
First Name (1)	Harry
Middle Name (1)	Vincent
Name Suffix (1)	(no data)
2.020 Place of Birth	YY

CERT-<station_id>-DOC-Intake1 Field	Value
2.021 Country of Citizenship	ZR
2.022 Date of Birth (0)	19800831
Date of Birth (1)	19791130
Date of Birth (2)	19790620
2.024 Sex/Gender	Female
2.025 Race	Black
2.026 Scars, Marks, and Tattoos	-
SMT Code (0)	PRCD L EYE
SMT Description (0)	(no data)
SMT Code (1)	TAT UL ARM
SMT Description (1)	Owl
2.027 Height	507
2.029 Weight	185
2.031 Eye Color	Hazel
2.032 Hair Color	Brown
2.035 Palm Prints Available	Yes
2.036 Photo Available	No
2.038 Date Printed	Livescan: NOT user entered.
2.056 Caution Comments	Uses a Nimbus 2000 broomstick
2.703 Drivers License	-
Driver's License State (0)	MS
Driver's License # (0)	111-333-666
Driver's License State (1)	AK
Driver's License # (1)	222-333-666

<i>CERT-<station_id>-DOC-Intake1 Field</i>	<i>Value</i>
2.709 DOC #	DOCTEST111

7.2.6 CERT-<station_id>-DOC-LEApp1

Read the first page of Appendix B before entering this APP transaction.

CERT-<station_id>-DOC-LEApp1 Field	Value
Type 1 Record:	
1.07 Print Agency ORI	Livescan: NOT user entered. Hardcoded value as indicated in introduction to Appendix B.
1.08 Applicant Agency ORI	MSCERT004
1.09 Transaction Control No	CERT-<station_id>-DOC-LEApp1
Type 2 Record:	
2.009 Originating Agency Case #	02-666666
2.016 Social Security # (0)	222222888
2.017 Miscellaneous Id #	-
Misc Id # Type (0)	Natl Agency Nr
Misc Id # Value (0)	12-S3000
Misc Id # Type (1)	Passport Nr
Misc Id # Value (1)	55556
2.018 Name	-
Last Name (0)	VADER
First Name (0)	Dennis
Middle Name (0)	LUKE
Name Suffix (0)	III
Last Name (1)	JAMES EARL
First Name (1)	X
Middle Name (1)	(no data)
Name Suffix (1)	(no data)
2.020 Place of Birth	LA

CERT-<station_id>-DOC-LEApp1 Field	Value
2.021 Country of Citizenship	US
2.022 Date of Birth (0)	19850505
2.024 Sex/Gender	Male
2.205 Race	White
2.026 Scars, Marks, and Tattoos	–
SMT Code (0)	TAT UP LIP
SMT Description (0)	(none)
2.027 Height	510
2.029 Weight	250
2.031 Eye Color	Black
2.032 Hair Color	Orange
2.037 Reason Fingerprinted	<set to Law Enforcement by scanning station based on type of submission>
2.038 Date Printed	Livescan: NOT user entered.
2.039 Employment	–
Occupation	Construction Foreman
Employer Name	Acme Inc
Employer Address 1	100 Columbus St
Employer Address 2	(no data)
Employer Address 3	Riverville, MS 22222
2.041 Residence	–
Residence Address 1	888 Grand Blvd
Residence Address 2	Richards, MS 22345
Residence Address 3	(no data)
2.703 Drivers License	–

CERT-<station_id>-DOC-LEApp1 Field	Value
Driver's License State (0)	MS
Driver's License # (0)	666-666-666
Driver's License State (1)	AK
Driver's License # (1)	AK-222222
2.707 Response Address	-
Response Addressee	Han Solo Inc.
Response Address 1	P.O. C3
Response Address 2	(no data)
Response Address 3	Enterprise, VA 44444
Response Phone #	222-111-4444

7.2.7 CERT-<station_id>-DOC-Intake2

Read the first page of Appendix B before entering this DOC transaction.

CERT-<station_id>-DOC-Intake2 Field	Value
Type 1 Record:	
1.07 Print Agency ORI	Livescan: NOT user entered. Hardcoded value as indicated in introduction to Appendix B.
1.08 DOC Agency ORI	MSCERTDOC
1.09 Transaction Control No	CERT-<station_id>-DOC-Intake2
Type 2 Record:	
2.018 Name	-
Last Name (0)	BAGGINS
First Name (0)	Bruce
Middle Name (0)	(no data)
Name Suffix (0)	(no data)
2.020 Place of Birth	US
2.022 Date of Birth (0)	19800831
2.024 Sex/Gender	Male
2.025 Race	White
2.031 Eye Color	Hazel
2.032 Hair Color	Black
2.035 Palm Prints Available	Yes
2.036 Photo Available	Yes
2.038 Date Printed	Livescan: NOT user entered.
2.709 DOC #	DOCTEST222

7.3 B.4 CIC INSTATE ONLY TRANSACTIONS

Data for test transactions are specified on the following pages.

In these sample transactions, occurrences in a repeating field are numbered beginning with 0 going through n. However, if occurrences in a repeating field have errors, they appear in the Reject Notice as occurrences (OCC) 1 through n+1.

7.3.1 CERT-<station_id>- CIC-Instate1

Read the first page of Appendix B before entering this APP transaction.

CERT-<station_id>- CIC-Instate1 Field	Value
Type 1 Record:	
1.07 Print Agency ORI	Cardscan: MSCERT004 This field is user entered ONLY IF the certification is for a cardscan. Livescan: NOT user entered. Hardcoded value as indicated in introduction to Appendix B.
1.08 Applicant Agency ORI	MSCERT001
1.09 Transaction Control No	CERT-<station_id>-CIC-Instate1
Type 2 Record:	
2.009 Originating Agency Case #	02-111111
2.016 Social Security # (0)	777777777
Social Security # (1)	333333333
2.017 Miscellaneous Id #	-
Misc Id # Type (0)	Natl Agency Nr
Misc Id # Value (0)	12-X99
Misc Id # Type (1)	Passport Nr
Misc Id # Value (1)	1234567890
2.018 Name	-
Last Name (0)	VADER
First Name (0)	Derek
Middle Name (0)	LUKE
Name Suffix (0)	JR
Last Name (1)	JAMES EARL
First Name (1)	X
Middle Name (1)	(no data)

CERT-<station_id>- CIC-Instate1 Field	Value
Name Suffix (1)	(no data)
2.020 Place of Birth	YY
2.021 Country of Citizenship	US
2.022 Date of Birth (0)	19850505
Date of Birth (1)	19460606
Date of Birth (2)	19570707
2.024 Sex/Gender	Male
2.025 Race	White
2.026 Scars, Marks, and Tattoos	-
SMT Code (0)	TAT UP LIP
SMT Description (0)	Helmet
SMT Code (1)	TAT UL ARM
SMT Description (1)	Owl
2.027 Height	604
2.029 Weight	325
2.031 Eye Color	Black
2.032 Hair Color	Blond
2.037 Reason Fingerprinted	<set to Instate Inquiry Only by scanning station based on type of submission>
2.038 Date Printed	Cardscan: 20170703 This field is user entered ONLY IF the certification is for a cardscan. Livescan: NOT user entered.
2.039 Employment	-
Occupation	(no data)
Employer Name	(no data)

CERT-<station_id>- CIC-Instate1 Field	Value
Employer Address 1	345 Walnut St
Employer Address 2	Suite 45
Employer Address 3	Riverville, MS 22222
2.041 Residence	–
Residence Address 1	200 Side Street
Residence Address 2	(no data)
Residence Address 3	Riverville, MS 22225
2.703 Drivers License	–
Driver's License State (0)	MS
Driver's License # (0)	666-666-666
Driver's License State (1)	AK
Driver's License # (1)	AK-222222
2.707 Response Address	–
Response Addressee	Han Solo Inc.
Response Address 1	P.O. C3
Response Address 2	(no data)
Response Address 3	Enterprise, VA 44444
Response Phone #	222-111-4444

8.0 APPENDIX C TENPRINT CAPTURE DIAGRAMS FROM THE FBI

The content of this appendix is extracted from the FBI's guidance on "Recording Legible Fingerprints". See <https://www.fbi.gov/services/cjis/fingerprints-and-other-biometrics/recording-legible-fingerprints>.


Key considerations when capturing rolled prints include (see Figure 1):

- Rolled impressions are the ten individually-taken fingerprint images rolled from nail to nail.
- When taking the rolled impression, the side of the finger bulb is placed upon the platen.
- The finger is then rolled to the other side until it faces the opposite direction.
- The thumbs should be rolled toward the center of the individual's body. The fingers should be rolled away from center of the individual's body.
- Roll each finger from nail to nail in the appropriate space, taking care to lift each finger up after rolling to avoid smudging.

Figure 1 - Roll Fingerprints Nail to Nail

Roll Fingerprints Nail to Nail*
(*These instructions are not applicable if submitting flat impressions only.)

Loop **Whorl**

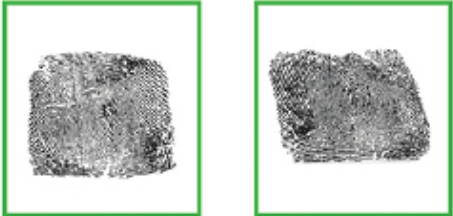


INCORRECT

Deltas need to be present in both the Loop and Whorl patterns.

Delta: the point on a ridge at or nearest the point of divergence of two type lines, and located at or directly in front of the divergence.

Loop **Whorl**



CORRECT

1. Roll finger in a smooth continuous motion from nail to nail.
2. Roll thumbs towards subject. Roll fingers away from the subject.
3. Ensure entire first joint of the finger is in constant contact with the card.

9.0 APPENDIX D FACIAL IMAGE CAPTURE CONSIDERATIONS

ANNEX E of ANSI/NIST-ITL-1-2011 describes describing the capture of facial images at SAP levels 30 and above. This appendix focus on booking station considerations and it extracted from the FBI's guidance on Mug Shot Capture. See <https://www.fbibiospecs.cjis.gov/Face>.

There is a wide range of problems common to mug shots that can interfere with the effectiveness of facial recognition software. These problems generally involve a combination of four factors: camera, background, lighting, and subject posing. While a better camera can produce an immediate improvement in image resolution, if the other three factors are not addressed it is unlikely that the usefulness of the photos will be changed significantly.

Simple changes to your booking station environment and photography techniques that will substantially improve the quality of your mug shots. These suggestions involve the use of readily available materials and a minimum of effort and expense.

9.1 BACKGROUND

Background problems fall into two categories:

1. Background brightness and color
2. Background obstructions

Automatic exposure functions on cameras analyze the brightness value (luminosity) of objects in a photograph and average those levels to achieve a proper exposure setting on the camera. A solid black background in a mug shot could result in the subject's facial features being overexposed and washed out. A solid white background could result in the subject's facial features being underexposed and dark.

Photography companies have established a specific shade of gray as the ideal luminosity for proper exposure. It is identified as 18% reflectance gray. A few examples of paint that are reasonably close include: Benjamin Moore 2132-40, Sherwin Williams SW 7074, Glidden GLN46, Behr UL260-4, Olympic D58-4, and Valspar 4005-2A. The exact duplication of this shade is not critical; however, it does need to be gray to avoid interfering with the automatic color settings on your digital camera. Also, it should have a matte finish to avoid glare.

The other background consideration involves having shapes in the photograph that facial recognition software may mistake for facial features. These sometimes include: wood grain, cinder blocks, wallpaper, shadows, texture, height charts, and mirrors. In order for facial recognition software to "find" the face, the background should be completely smooth and featureless.

9.2 LIGHTING

The auto exposure capabilities of today's digital cameras and a gray background should provide for exposure considerations when taking booking photos. However, steps still need to be taken to correct problems with the intensity and harshness of the light, as well as the location of the light source. While many consumer-grade cameras can take recognizable photographs in low light, the sharpness of the picture can be severely degraded due to light amplification features of the camera or motion blur. Lights placed too directly overhead or uneven, harsh light sources can cast shadows on the face and background that obscure facial characteristics and interfere with facial recognition software. On-camera flash creates problems with red-eye and background shadows.

All of these lighting considerations can be easily remedied by installing dedicated light fixtures readily available at any national hardware store or possibly already available at your location.

Four-bulb, four-foot long, fluorescent lighting fixtures are commonly available. Two of these fixtures can be hung in front of your booking photograph location. Combined, they should provide sufficient light to reduce problems with low-light underexposure and picture sharpness. Because of their size and light diffusing covers, the problems of harshness and shadows should be eliminated on both the face of the subject and the background.

Detailed specifications for collecting facial recognition images in an ideal environment can be found in a document titled, “Standard Guide for Capturing Facial Images for Use with Facial Recognition Systems” on the Facial Identification Scientific Working Group (FISWG) website at https://fiswg.org/FISWG_Guide_for_Capturing_Facial_Images_for_FR_Use_v2.0_20190510.pdf.

On a typical eight-foot ceiling, these fixtures should be hung about five feet in front of your photographic background. They should be angled downward at about 45 degrees and inward to get the maximum light on the face of the person being photographed.

It is strongly advised that these light fixtures be professionally installed according to local building codes and in a manner that will preclude the possibility of injury.

9.3 SUBJECT POSING

It is important for the purpose of facial recognition that the person being photographed is looking directly at the camera with their full face and ears exposed and without any facial expression. Subject should not be wearing glasses. Tilting or rotating of the head can cause inaccurate facial measurements that may result in recognition problems. Several common errors are addressed in the Figure below, ***“Your Mug Shots Should Look Much Like This.” This Figure serves as a quick reference and can be printed and permanently displayed in view of the person taking the mug shots.***

Your Mug Shots Should Look Much Like This

1. Face Straight On
2. Properly Lighted
3. Properly Composed



IMPORTANT
Your primary photo should be without glasses.

1.	Face Not Straight On				
		Side to side tilt	Front to back tilt	Side to side rotation	Smile or grimace, mouth open
2.	Not Properly Lighted				
		Too light	Too dark	Unevenly lit	Shadows on background
3.	Not Properly Composed				
		Too loose	Too tight	Texture or objects in background	Obstructions to face hair, glasses, piercings, dirt, blood, excessive make-up

When possible, long hair should be tied back or at least tucked behind ears.



Head coverings should be removed unless they serve a religious or medical purpose.

* These photographs are not actual mugshots and the person depicted therein has no criminal history. They are being utilized for educational purposes only.

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