



ICAO

MACHINE READABLE TRAVEL DOCUMENTS TECHNICAL REPORT

GUIDANCE DOCUMENT ON PHYSICAL CONFORMANCE – COMPLEMENTARY TESTS TO DOC 9303-PART 3&4

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1 Introduction

1.1 General

[Doc9303-3] and [Doc9303-4] of ICAO specify characteristics that are common to TD3 size machine readable travel documents (MRTDs) including those necessary for global interoperability using visual inspection and machine readable (optical character recognition) means. Part 4 defines specifications that are specific to TD3 size Machine Readable Passports (MRPs) and other TD3 size Machine Readable Travel Documents (MRTDs).

A set of instructions for prototype evaluation of Machine Readable Passports (MRPs) which may incorporate contactless integrated circuits is provided by ISO/IEC 18745-1: 2018, Test methods for machine readable travel documents (MRTD) and associated devices —Part 1: Physical test methods for passport books (durability).

The stress and evaluation methods for the document are described as well as test sequences defined to specify the order in which stress methods and evaluation methods are to be performed in order to execute a specific test.

ISO/IEC 18745-1 is a companion to ICAO Doc 9303. It specifies the minimum criteria to be achieved in order to meet ICAO's expectations for durability of fully personalized MRPs. Therefore, by its existence, and endorsement by ICAO, this document implicitly defines additional requirements for passports above and beyond Doc 9303. Some of the tests described herein are also intended to serve as an instrument for the assessment of the ageing behaviour of the MRP and its components.

In addition to these physical tests a series of ISO specifications and ICAO TRs are defining tests for the electric component and contactless interface of the eMRTD. The original plan was to combine them in an ISO/IEC test-series under 18745, but only 18745-1 and 18745-2 were published so far. The other relevant documents published are:

- ISO/IEC 18745-2:2016, Information technology -- Test methods for machine readable travel documents (MRTD) and associated devices -- Part 2: Test methods for the contactless interface.
ISO/IEC 18745-2:2016 defines the test plan, based on ISO/IEC 10373-6, for the contactless interface of eMRTDs and eMRTD associated readers compliant with ICAO Doc 9303. Application requirements for eMRTD and eMRTD reader are outside of the scope of ISO/IEC 18745-2:2016.
- ICAO TR RF and Protocol Testing Part 3, Tests for Application Protocol and Logical Data Structure.
This test specification covers the application interface, i.e. the ISO/IEC 7816 conformance of the eMRTD Chip and the conformance of the LDS.
- ICAO TR RF and Protocol Testing Part 4, Conformity Test for Inspection Systems.
This test plan consists of two separate parts. Layer 6 defines tests for the application protocol data units (APDUs) based on [ISO/IEC 7816-4] sent by the inspection system application and the correct processing of the corresponding MRTD responses. Layer 7 verifies the correct processing of the logical data structure read from the MRTD.
- ICAO TR RF and Protocol Testing Part 5, Tests for PKI Objects.
This test specification of ICAO specifies the Public Key Infrastructure (PKI) for the eMRTD application including certificates, Certification Revocation Lists (CRLs) and Master Lists.

1.2 Scope and purpose

The MRTD has been specified and designed to operate correctly across a wide variety of reading infrastructures worldwide. An improperly designed or manufactured (e)MRTD may have negative consequences for the holder of the document. Therefore, it is essential that all manufacturers and issuers make reasonable efforts to ensure faults or errors are detected prior to issuance.

An essential element of the ICAO compliant MRTD next to the addition of a Secure Contactless Integrated Circuit (SCIC) that holds securely biometric data of the MRTD bearer within the ICAO defined Logical Data Structure (LDS) is the physical document itself.

This document contains the summary of the ICAO compliance check to be performed on MRTD specimens. The evaluation is conducted against the applicable sections of Doc 9303 8th edition, [Doc9303-3] in section 3 and [Doc9303-4] in section 4 of this document.

Focus of this document are compliance tests to Machine Readable Passports (MRPs) as defined by ICAO Doc 9303. Other travel documents like the United Nations laissez-passer, Machine Readable Convention Travel Documents (MRCTDs) or seafarer's identity documents are not within the scope of this technical report.

Durability testing is conducted separately. For guidance see [ISO/IEC 18745-1].

Note that this test specification addresses functional aspects only. Security features are out of scope for the present edition.

1.3 Key words

Key words are used to signify requirements.

The key words “MUST”, “MUST NOT”, “REQUIRED”, “SHALL”, “SHALL NOT”, “SHOULD”, “SHOULD NOT”, “RECOMMENDED”, “MAY”, and “OPTIONAL” used in capitalized form in Doc 9303 are to be interpreted as described in [RFC2119].

MUST	This word, or the terms “REQUIRED” or “SHALL”, or the adjective ‘MANDATORY’ means that the definition is an absolute requirement of the specification
MUST NOT	This phrase, or the phrase “SHALL NOT”, means that the definition is an absolute prohibition of the specification.
SHOULD	This word, or the adjective “RECOMMENDED”, means that there may exist valid reasons in particular circumstances to ignore a particular item, but the full implications must be understood and carefully weighed before choosing a different course.
SHOULD NOT	This phrase, or the phrase “NOT RECOMMENDED” means that there may exist valid reasons in particular circumstances when the particular behaviour is acceptable or even useful, but the full implications should be understood and the case carefully weighed before implementing any behaviour described with this label.
MAY	This word, or the adjective “OPTIONAL”, means that an item is truly optional. One user may choose to include the item because a particular application requires it or because the user feels that it enhances the application while another user may omit the same item. An implementation which does not include a particular option MUST be prepared to interoperate with another implementation which does include the option, though perhaps with reduced functionality. In the same vein an implementation which does include a particular option MUST be prepared to interoperate with another implementation which does not include the option (except, of course, for the feature the option provides).
CONDITIONAL	The usage of an item is dependent on the usage of other items. It is therefore further qualified under which conditions the item is REQUIRED or

RECOMMENDED. This is an additional key word used in Doc 9303 (not part of RFC 2119).

1.4 Abbreviations

Abbreviation	
(e)MRTD	electronic Machine Readable Travel Document (with integrated contactless circuits)
ICAO	International Civil Aviation Organization
LDS	Logical Data Structure
MRCTD	Machine Readable Convention Travel Document
MRP	Machine Readable Passport
MRTD	Machine Readable Travel Document
MRZ	Machine Readable Zone
SCIC	Secure Contactless Integrated Circuit
VIZ	Visual Inspection Zone

1.5 Reference documentation

The following documentation served as reference for this technical report:

[Doc9303-2]	ICAO Doc 9303 Machine Readable Travel Documents, Eighth Edition 2021 Part 2: Specifications for the Security of the Design, Manufacture and Issuance of MRTDs
[Doc9303-3]	ICAO Doc 9303 Machine Readable Travel Documents, Eighth Edition 2021 Part 3: Specifications Common to all MRTDs
[Doc9303-4]	ICAO Doc 9303 Machine Readable Travel Documents, Eighth Edition 2021, Part 4: Specifications for Machine Readable Passports (MRP) and other TD3 size MRTDs
[Doc9303-11]	ICAO Doc 9303 Machine Readable Travel Documents, Eighth Edition 2021, Part 11: Security Mechanisms for MRTDs
[ICAO TR RF and Protocol Testing Part 3]	ICAO TR Radio Frequency and Protocol Testing Part 3, Version 2.11, 2018, Tests for Application Protocol and Logical Data Structure
[ICAO TR RF and Protocol Testing Part 4]	ICAO TR Radio Frequency and Protocol Testing, Part 4, Version 2.11, Conformity Test for Inspection Systems
[ICAO TR RF and Protocol Testing Part 5]	ICAO TR Radio Frequency Protocol and Application Test Standard for eMRTD – Part 5, Version 1.0, 2018, Tests for PKI Objects
[ISO 1073-2]	ISO 1073-2:1976, Alphanumeric character sets for optical recognition – Part 2: Character set OCR-B – Shapes and dimensions of the printed image
[ISO 1831]	ISO 1831:1980, Printing specifications for optical character recognition
[ISO/IEC 18745-1]	ISO/IEC 18745-1:2018, Test methods for machine readable travel documents (MRTD) and associated devices —Part 1: Physical test methods for passport books (durability).
[ISO/IEC 18745-2]	ISO/IEC 18745-2:2016, Information technology — Test methods for machine readable travel documents (MRTD) and associated devices — Part 2: Test methods for the contactless interface
[ISO/IEC 30116]	ISO/IEC 30116:2016 Information technology — Automatic identification and data capture techniques — Optical Character Recognition (OCR) quality testing
[ISO 3166-1]	ISO 3166-1:2006 Codes for the representation of names of countries and their subdivisions — Part 1: Country codes
[ISO/IEC 39794-5]	ISO/IEC 39794-5: 2019, Information technology — Extensible biometric data interchange formats — Part 5: Face image data
[RFC2119]	S. Bradner, RFC 2119 Key words for use in RFCs to Indicate Requirement Levels, March 1997

2 General test/evaluation requirements

2.1 General

The tests/evaluations defined in this document require a fully personalized (e)MRTD. This means that all MANDATORY information MUST be present. All tests are MANDATORY unless marked as OPTIONAL or CONDITIONAL.

2.2 Test/evaluation setup

This document contains a summary of the ICAO [Doc9303-3] and [Doc9303-4] compliance check to be performed on (e)MRTD specimens. Results are separated by individual parts 3 and 4 of Doc 9303 as per the matrix listed below. Refer to the legend at the start of each Part.

The structure defined for this technical report will:

- identify if a feature is either MANDATORY, OPTIONAL, CONDITIONAL or could not be tested
- list the criteria/ methodology defined to evaluate the feature
- if available appropriate remarks are given to identify details of expected results

To be able to refer to the MANDATORY, OPTIONAL, CONDITIONAL features defined in ICAO [Doc9303-3] and [Doc9303-4] this test document retains the structure and section numbering of ICAO [Doc9303-3] in Section 3 of this document and of ICAO [Doc9303-4] in Section 4 of this document. In some instances this results in a non-consecutive numbering schema where sections are missing that do not contain any testable features.

The scope of this document are compliance checks for defined features that are essential for interoperability.

Ref	Part	§	Requirement(s)	M.O.C.N	Issuer profile	Status P. F.Ob.
			Criteria			
			Remarks:			

Abbreviations:

- Ref: Reference Number of the test
- Part: ICAO doc part considered by the test
- §: Paragraph of the part considered
- Requirement(s): Main objective of the test
- Criteria: List of elementary criteria that apply to the objective
- Remarks: Complementary information in order to help the user
- M.O.C.N: Identify a feature as either Mandatory, Optional, Conditional or Not tested
- Issuer Profile: choices made by the issuing authority with reference to optional or conditional features
- Status P.F.Ob.: Status "Pass, Fail, Observation". The column is used to indicate the test results.
Observation is used mainly for Conditional or Optional criteria beyond the indicated limits.

- For REQUIRED features a Pass or Fail statement SHALL be used and an observation MAY be used.

- For CONDITIONAL features that are further qualified as REQUIRED and implemented by an MRTD, a Pass or Fail statement SHALL be used and an observation MAY be used.
- For CONDITIONAL features that are further qualified as RECOMMENDED and implemented by an MRTD, a Pass or Fail statement SHALL NOT be used, but an observation SHALL be used.
- For OPTIONAL features a Pass or Fail statement SHALL NOT be used, but an Observation SHALL be used."

Samples of each type of (e)MRTD (e.g. regular, diplomatic, etc.) SHOULD be evaluated to ensure any variation within the personalization is properly examined. Three personalized (e)MRTD samples are needed for executing the tests. Each sample MUST include a unique serial number or other means for identification. Specimen provided for tests MUST be personalised using the personalization equipment and by the personalisation system/software that will be used for issuance. Samples used in the testing process SHOULD be retained should clarifications be required in the future.

The focus of this matrix is directed primarily on the physical properties and the personalization of the MRTD, and does not cover the issuance process, facilities, or other discretionary elements that the issuing State or organization MAY incorporate, such as machine assisted authentication features.

The test/evaluation matrix is based exclusively on the specimens provided for the evaluation, and the personalized elements as contained on the data page or an adjacent page. There is a multitude of special cases permissible under ICAO Doc 9303. Unless specimens are presented which represent unique cases (e.g. truncated names, etc.), it will not be possible to validate all variations produced by the issuing State or organization. It should also be noted that this evaluation requires highly specialized knowledge of both ICAO Doc 9303 and ISO standards.

However the issuer of the tested specimen is advised to provide an implementation conformance statement to provide information on the specific national properties used in the specimen. Examples for the information to be provided can be found in “Table 1: Implementation conformance statement on specific national properties” at the end of this section.

2.3 Preliminary test/evaluation

The issuance of (e)MRTDs is preceded by a long process including numerous steps spanning from design and validation (including by the issuing authority) to qualification of production. This process is time consuming and potentially iterative.

To reduce the risk that non-conformance of (e)MRTDs is identified at a late stage in this process, one SHOULD consider to evaluate the (e)MRTD design early on in the process.

Electronic design data such as Portable Document Format (PDF) describing the (e)MRTD MAY be used to create a limited-in-scope, preliminary test report. It is apparent that testing based on electronic design data is limited to a subset of the tests described herein and, as a consequence, only a preliminary test report MAY be issued. Such preliminary test report SHALL clearly identify the electronic design data used and the (limited set of) tests applied.

Reference		Property to be defined
3 - 3	VISUAL INSPECTION ZONE (VIZ)	Specification the character set for the different languages used in the data fields of the VIZ
3 – 3.1	Language and Character	Specification of the character set in the different languages including punctuation

3 - 3.2	Typeface and Type Size	Specification of prefixes that are acceptable in the national language used
3 - 3.3	Captions/Fields	Specification the languages used in the specimen
3 - 3.4	Convention for Writing the Name of the Holder	Specification the use of numeric characters in naming conventions. Specification of the national rules for truncation.
3 - 39794-5 D.1.4.3	Portrait quality: Subject conditions	Specification of ethnic or individual exceptions for pupils and irises completely visible. Specification of medical exceptions for eyes looking into the camera. Specification of medical exceptions for eye patches.
3 - 4.6	Convention for Writing the Name of the Holder	Specification of prefixes and suffixes that are acceptable in the national language used including titles, professional and academic qualifications, honours, awards, and hereditary status (such as Dr., Sir, Jr., Sr., II and III) that the issuing State considers to be legally part of the name
4 - 4.2.3	Truncation of names in the MRZ	Specification of the national rules for truncation in the MRZ

Table 1: Implementation conformance statement on specific national properties

Accordingly examples for the information on specific national properties not to be considered can be found in the table below.

Reference		Property not to be considered
3 - 3.4	Convention for Writing the Name of the Holder	Specification of prefixes and suffixes that are not acceptable in the national language used
3-3.9.1.3	Portrait quality: Printing for MRTD production	Accurate recognizable representation of the subject
3 - 3.9.2	Displayed signature or usual mark	The acceptability of a displayed signature or usual mark is at the issuing State or organization's discretion. The aspect ratio (A-dimension to B-dimension) of the original signature or usual mark SHALL be maintained. Scaling for reproduction using digital printing. Where resizing is necessary, the aspect ratio (A-dimension to B-dimension) of the original signature or usual mark SHALL be maintained. Cropping for reproduction using digital printing. The issuing State or organization SHOULD take steps to eliminate or minimize cropping. The displayed signature or usual mark SHALL NOT be reduced in size by more than 50 per cent.
3 - 3.9.3	Displayed single-digit fingerprint	<i>Size.</i> The displayed single-digit fingerprint SHALL be a one-to-one replication (A-dimension versus B-dimension) of the original print. <i>Scaling for reproduction using digital printing.</i> Scaling of a single-digit fingerprint SHALL NOT be permitted.

		<i>Cropping for reproduction using digital printing. The issuing State or organization SHOULD take steps to eliminate or minimize cropping.</i>
4 - 4.2.1.3	Data position, data elements and print position in the MRZ	The reference to the mentioned centre line in the greyed out section should not be implemented, please refer to base line instead.

Table 2: Implementation conformance statement on specific national properties not to be considered

The expert evaluation SHOULD decide what tools to use and how to perform the tests. The tools and methodology used in the evaluation SHALL be documented in the report in a level of detail that allows reproduction of the test results.

To receive a final PASS result of the conformance test all tests defined as MANDATORY MUST be passed.

Note that the matrix of tests/evaluations to be performed is cross-referenced to ICAO Doc 9303 (8th Edition). The terms 'SHALL' and 'MUST' are interpreted as MANDATORY elements. The terms 'SHOULD' and 'MAY' are interpreted as OPTIONAL.

3 Physical Conformity Test Specifications to [Doc9303-3]

3.3 Visual Inspection Zone (VIZ)

3.3.1 Language and Character

Ref	Part	§	Requirement(s)	M.O.C.N	Issuer profile	Status P. F. Ob.
	3	3	VISUAL INSPECTION ZONE (VIZ) The Visual Inspection Zone of an MRTD comprises the MANDATORY and OPTIONAL data elements designed for visual inspection. The OPTIONAL data elements, together with the MANDATORY data elements, accommodate the diverse requirements of issuing States and organizations while maintaining sufficient uniformity to ensure global interoperability for all MRTDs.	M/O		
1	3	3.1	Language and Character	M/O		
		Criteria	<ol style="list-style-type: none"> 1 Latin-alphabet characters, i.e. A to Z and a to z, and Arabic numerals, SHALL be used in the VIZ. 2 Diacritics are permitted. Latin-based national characters listed in [Doc 9303-3] Section 6.A “Transliteration of Multinational Latin-based Characters”, e.g. P and ß, may also be used in the VIZ without transliteration. 3 Where MANDATORY data elements are in a language that does not use the Latin alphabet, a transcription or transliteration into Latin alphabet SHALL also be provided. 4 States that use other than Arabic numerals to represent numerical data in the VIZ SHALL provide a translation into Arabic numerals. 5 In the interests of facilitation, optional data elements should be entered in both the national language/working language of the issuing organization and either English, French or Spanish. 6 Optional data in Zone VI may be entered entirely in the national script and/or language. 7 Punctuation MAY be used in the VIZ. For details see [Doc 9303-4]. 8 When including a translation, the different language SHALL be separated by an oblique character. 	M O C/M C/M O O C/M		P.F.Ob.
		Remarks:	Check for Latin-alphabet characters, i.e. A to Z, and Arabic numerals i.e. 1234567890 Check chapter 6A “Transliteration of Multinational Characters”, if needed. Check for the allowed character set in the different languages including punctuation (see Table 1: Implementation conformance statement on specific national properties in Section 2.3).			

				Note: The following test cases contain additional test criteria for the oblique character.			
--	--	--	--	---	--	--	--

3.3.2 Typeface and Type Size

Ref	Part	§	Requirement(s)	M.O.C.N	Issuer profile	Status P. F. Ob.	
2	3	3.2	Typeface and Type Size The horizontal printing density, the typeface, the type size, the font and the vertical line spacing in the VIZ are at the discretion of the issuing State or organization.	O			
			<table border="0"> <tr> <td style="vertical-align: top;">Criteria</td> <td> 1 For good legibility a type size with 10 characters per 25.4 mm (1.0 in) is RECOMMENDED 2 A maximum of 15 characters per 25.4 mm (1.0 in) SHOULD NOT be exceeded 3 The use of upper-case characters is RECOMMENDED 4 Where a name includes a prefix, an appropriate mixture of upper and lower case characters MAY be used in the prefix (see § 3.4) 5 Diacritical marks (accents) MAY be used with either lower- or upper-case characters </td> </tr> </table>	Criteria	1 For good legibility a type size with 10 characters per 25.4 mm (1.0 in) is RECOMMENDED 2 A maximum of 15 characters per 25.4 mm (1.0 in) SHOULD NOT be exceeded 3 The use of upper-case characters is RECOMMENDED 4 Where a name includes a prefix, an appropriate mixture of upper and lower case characters MAY be used in the prefix (see § 3.4) 5 Diacritical marks (accents) MAY be used with either lower- or upper-case characters	O O O O O	P.F.Ob.
			Criteria	1 For good legibility a type size with 10 characters per 25.4 mm (1.0 in) is RECOMMENDED 2 A maximum of 15 characters per 25.4 mm (1.0 in) SHOULD NOT be exceeded 3 The use of upper-case characters is RECOMMENDED 4 Where a name includes a prefix, an appropriate mixture of upper and lower case characters MAY be used in the prefix (see § 3.4) 5 Diacritical marks (accents) MAY be used with either lower- or upper-case characters			
Remarks: Check type size Check maximum of 15 characters per 25.4 mm See Table 1: Implementation conformance statement on specific national properties in Section 2.3 for the prefix of a name.							

3.3.3 Captions/Fields

Ref	Part	§	Requirement(s)	M.O.C.N	Issuer profile	Status P. F. Ob.
3	3	3.3	Captions/Fields	M		
			<p>Criteria 1 Captions SHALL be used to identify all fields for MANDATORY data elements in the VIZ (for further information see also test case 12 of Section 4 of this document and test case 16 of Section 4 of this document.)</p> <p>2 They SHALL be printed in a clear, linear type font in a size of 1.0 mm to 1.8 mm</p> <p>3 Exceptions are specified in the data element directories for each form factor in [Doc9303-4, Section 4.1.1.1]], see test case 12 of Section 4 of this document on [Doc9303-4]</p> <p>4 The official language of the issuing State or working language of the issuing organization MAY be used; if this language uses Latin characters, straight font style SHOULD be used to print the captions.</p> <p>5 If this language is not English, French or Spanish, the printed caption SHALL be followed by an oblique character (/) and the equivalent of the caption in English, French or Spanish</p> <p>6 An italic font style SHOULD be used for the second language</p> <p>7 If this language is English, French or Spanish, the issuing State or organization SHOULD use one of the other two languages to print the caption following the oblique (/) character</p> <p>8 An italic font style SHOULD be used for the second language</p> <p>9 Captions SHALL NOT appear on the travel document where OPTIONAL fields are not used</p>	M		P.F.Ob.
			<p>Remarks: Verify font type and size Verify that language, characters and font style correspond to national or working language.</p>	C		
				O		
				C/M		
				C/O		
				C/O		
				O		
				C/M		

3.3.4 Convention for writing the name of the holder

Ref	Part	§	Requirement(s)	M.O.C.N	Issuer profile	Status P. F. Ob.
4	3	3.4	Convention for writing the name of the holder	M		
			<p>Criteria</p> <p>1 There SHALL be a primary identifier present</p> <p>2 It is recommended that upper-case characters be used, except in the case of a prefix, e.g. “von,” “Mc” or “de la,” in which case a mixture of upper- and lower-case is appropriate.</p> <p>3 The primary identifier SHALL be in the specified field of the VIZ, see test case 12 of Section 4 of this document, criteria 6 and 7 on [Doc 9303-4]. There MAY be a secondary identifier present.</p> <p>4 If the name contains prefix or suffix these SHALL be part of the secondary identifier</p> <p>5 If present the secondary identifier SHALL be in the specified field of the VIZ</p> <p>6 If a single field is used for the name, then the secondary identifier SHALL be separated from the primary identifier by a single comma.</p> <p>7 Prefixes and suffixes including titles, professional and academic qualifications, honours, awards, and hereditary status, SHOULD NOT be included in the VIZ.</p> <p>8 Numeric characters SHOULD NOT be written in the name fields of the VIZ.</p> <p>9 However, where the use of numeric characters is a legal naming convention in the issuing State, these SHOULD be represented in Roman numerals.</p>	M O M C/M C/M C/M O O C/O		P.F.Ob.
			<p>Remarks:</p> <p>Verify that the personalized information is in the specified fields and meets the above criteria (5) Check if there are national rules for truncation of the name. Check the legal naming conventions in the Implementation Conformance Statement in Table 1.</p> <p>Note: Since it is not always clear whether a string is a Roman numeral or part of a name the test for Roman numerals in the primary identifier was deleted.</p>			

3.3.5 Representation of Issuing State or Organization

Ref	Part	§	Requirement(s)	M.O.C.N	Issuer profile	Status P. F. Ob.
5	3	3.5	Representation of Issuing State or Organization	M		
			Criteria 1 When the name of the issuing State or organization and/or the location of the issuing office or authority are in a language that does not use Latin characters, the name of the State or other location SHALL appear in the national language/working language of the issuing organization and 2 it SHALL be transliterated into Latin characters; or 3 it SHALL be translated into one or more languages (at least one of which MUST be English, French or Spanish) 4 Separate the name in the different languages by an oblique character (/) followed by at least one blank space. 5 If the name of the issuing State or organization or location of the issuing office or authority is in a language that uses the Latin alphabet, but the name is more familiar to the international community in its translation into another language or languages (particularly English, French or Spanish), the name SHOULD be accompanied by one or more translations. Note: The observation is subjective. 6 Separate the name in the different languages by an oblique character (/) followed by at least one blank space.	C/M C/M C/M M O M		P.F.Ob.
			Remarks: Verify that the personalized information is in the specified fields and meets the above criteria			

3.3.6 Representation of Nationality

Ref	Part	§	Requirement(s)	M.O.C.N	Issuer profile	Status P. F. Ob.	
6	3	3.6	Representation of Nationality	M			
			Criteria 1	If MANDATORY the nationality of the holder in the VIZ SHALL be represented by the three-letter code (see [Doc9303-3, Section 5]) or in full (for further information see also test case 12 of Section 4 of this document, criterion 9)	C/M		P.F.Ob.
			2	If written in full and the national language of the issuing State or working language of the issuing organization does not use Latin characters, it SHALL be transliterated into Latin characters; or it SHALL be translated into one or more languages (at least one of which MUST be English, French or Spanish)	C/M		
			3	Separate the nationality in the different languages by an oblique character (/) followed by at least one blank space.	C/M		
4	If the national language of the issuing State or working language of the issuing organization uses the Latin alphabet, but the nationality is more familiar to the international community in its translation into another language or languages (particularly English, French or Spanish), the nationality in the national/working language SHOULD be accompanied by one or more translations. Note: The observation is subjective.	M					
			5	The nationality in the different languages SHALL be separated by an oblique character (/) followed by at least one blank space.	O		
			6	Verify that the personalized information is in the specified fields and meets the above criteria	M		
			Remarks:				

3.3.7 Representation of Place of Birth

Ref	Part	§	Requirement(s)	M.O.C.N	Issuer profile	Status P. F. Ob.
7	3	3.7	Representation of Place of Birth	M		
			<p>Criteria 1 If the place of birth is included it MAY be represented by the town, the city, the suburb and/or the state.</p> <p>2 If the town, city or suburb is included and the national language of the issuing State or working language of the issuing authority is a language that does not use Latin characters, the town, city or suburb SHALL appear in the national/working language and</p> <p>3 it SHALL be transliterated into Latin characters; or</p> <p>4 it SHALL be translated into one or more languages (at least one of which MUST be English, French or Spanish)</p> <p>5 Separate the town, city or suburb in the different languages by an oblique character (/) followed by at least one blank space.</p> <p>6 If the national language of the issuing State or working language of the issuing organization uses the Latin alphabet, but the town, city or suburb is more familiar to the international community in its translation into another language or languages (particularly English, French or Spanish), the town, city or suburb in the national/working language SHOULD be accompanied by one or more translations. Note: The observation is subjective.</p> <p>7 Separate the town, city or suburb in the different languages by an oblique character (/) followed by at least one blank space.</p> <p>8 If the State is included and an ICAO three-letter code exists it SHALL be represented by its ICAO three-letter code (see Section 5)</p> <p>9 Where no ICAO three-letter code for the State of Birth exists, the name SHALL be written in full, and the requirements for translation and transliteration identified for town, city and suburb above apply.</p>	C/O		P.F.Ob.
				C/M		
				C/M		
				C/M		
				M		
				O		
				M		
				C/M		
				C/M		
			Remarks: Verify that the personalized information is in the specified fields and meets the above criteria			

3.3.8 Representation of dates in the VIZ

Ref	Part	§	Requirement	M.O.C.N	Issuer profile	Status P. F. Ob.	
8	3	3.8	Representation of dates in the VIZ	M			
			Criteria			P.F.Ob.	
			1	Dates SHALL be in accordance with the Gregorian calendar	M		
			2	The date SHALL either meet criterion 3 or criterion 4 including any referenced criteria.	M		
			3	<p>If the numeric form is used, the date SHALL be written DDnMMnYY or DDnMMnYYYY, where</p> <ul style="list-style-type: none"> • the day is encoded in two digits DD • the month is encoded in two digits MM • the year is encoded in two digits YY or four digits YYYY (RECOMMENDED) • n is a single blank space or a period. <p>If the date of birth is completely or partially unknown, every unknown digit SHALL be replaced by an X.</p>	C/M		
			4	<p>If the numeric form is not used, the date SHALL be written as concatenation of</p> <ul style="list-style-type: none"> • the day encoded in two digits DD followed by • an OPTIONAL blank space followed by • the encoding of the month (according to the criteria 5, 6, and 7 in this table) followed by • an OPTIONAL blank space followed by • the year encoded in two digits YY or four digits YYYY (RECOMMENDED) <p>If the date of birth is completely or partially unknown, every unknown digit (for days and year) and letter (for the month) SHALL be replaced by an X.</p>	C/M		
5	If the numeric form is not used: The month SHALL be either printed in full in the national language of the issuing State or working language of the issuing organization or abbreviated, using up to four character positions.	C/M					

			6	If the numeric form is not used: If the national language of the issuing State or working language of the issuing organization is not English, French or Spanish, the month SHALL be followed by an oblique character (/) and the month or the abbreviation of the month up to four character positions, in one of the three languages, as shown in table 1 [Doc9303-3, Section 3.8].	C/M		
			7	If the numeric form is not used: Where the national language of the issuing State or working language of the issuing organization is English, French or Spanish, the issuing State or organization MAY also use one of the other two languages (shown in Table 1 [Doc9303-3, Section 3.8]) following the oblique character (/).	O		
			Remarks:	Verify that the personalized information is in the specified fields and meets the above criteria			

3.3.9 Displayed Identification Features of the Holder

3.3.9.1 Displayed facial image

Refer to the normative requirements as specified in ISO/IEC 39794-5 Annex D.1.

3.3.9.1.1 Image printing for MRTD production

Ref	Part	§	Requirement(s)	M.O.C.N	Issuer profile	Status P. F. Ob.																																	
10	3 4	3.9.1.3 4.1.1.1	Image printing for MRTD production																																				
			<table border="1"> <thead> <tr> <th>Criteria</th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td>1</td> <td>In case of an eMRTD, be derived from the same digital image source as the image stored electronically in the MRTD.</td> <td>C/M</td> </tr> <tr> <td>2</td> <td>Be digitally printed, either greyscale or colour.</td> <td>M</td> </tr> <tr> <td>3</td> <td>All flesh tones SHOULD be printed accurately and no hot spots or shadow drop-out should be apparent.</td> <td>O</td> </tr> <tr> <td>4</td> <td>Minimized Moiré or dot patterns in the printed image.</td> <td>O</td> </tr> <tr> <td>5</td> <td>Centered in Zone V.</td> <td>M</td> </tr> <tr> <td>6</td> <td>Crown near to the top edge of the data page.</td> <td>M</td> </tr> <tr> <td>7</td> <td>Crown to chin 70% to 80% of the Zone V maximum size. This MAY lead to invisible hair.</td> <td>M</td> </tr> <tr> <td>8</td> <td>No border or frame.</td> <td>M</td> </tr> <tr> <td>9</td> <td>The portrait SHALL not be larger than 45.0 mm x 35.0 mm nor smaller than 32.0 mm x 26.0 mm.</td> <td>M</td> </tr> <tr> <td>10</td> <td>The position of the portrait Zone V SHALL be aligned to the left of Zones II, III and IV.</td> <td>M</td> </tr> </tbody> </table>	Criteria			1	In case of an eMRTD, be derived from the same digital image source as the image stored electronically in the MRTD.	C/M	2	Be digitally printed, either greyscale or colour.	M	3	All flesh tones SHOULD be printed accurately and no hot spots or shadow drop-out should be apparent.	O	4	Minimized Moiré or dot patterns in the printed image.	O	5	Centered in Zone V.	M	6	Crown near to the top edge of the data page.	M	7	Crown to chin 70% to 80% of the Zone V maximum size. This MAY lead to invisible hair.	M	8	No border or frame.	M	9	The portrait SHALL not be larger than 45.0 mm x 35.0 mm nor smaller than 32.0 mm x 26.0 mm.	M	10	The position of the portrait Zone V SHALL be aligned to the left of Zones II, III and IV.	M			
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Remarks: Check position and size of the portrait. In any case, the final appearance of the facial image SHALL be natural, no stretching SHALL be visible.																																							

3.3.9.2 Displayed signature or usual mark

Ref	Part	§	Requirement	M.O.C.N	Issuer profile	Status P. F. Ob.
15	3	3.9.2	Displayed signature or usual mark	M		
			Criteria <ol style="list-style-type: none"> 1 A displayed signature or usual mark appears in Zone IV. 2 It SHALL be either an original created on the MRTD, 3 a digitally printed reproduction of an original or, 4 where permitted by specifications defined in Doc 9303 Parts 4 to 7 specific to the preparation of the different types of MRTDs, on a substrate that can be securely affixed to the MRTD. 5 <i>Orientation.</i> The displayed signature or usual mark SHALL be displayed horizontal to the longer edge of the MRTD. 6 <i>Colour.</i> The displayed signature or usual mark SHALL be displayed in a colour that affords a definite contrast to the background. 7 <i>Borders.</i> Borders or frames to outline the displayed signature or usual mark SHALL NOT be permitted or used. 	M C C C M O M		P.F.Ob.
			Remarks: Check position and measure size of displayed signature or usual mark. Check colour and borders of displayed signature or usual mark.			

3.3.9.3 Displayed single-digit fingerprint

Ref	Part	§	Requirement	M.O.C.N	Issuer profile	Status P. F. Ob.									
16	3	3.9.3	Displayed single-digit fingerprint	M											
			<table border="0"> <tr> <td style="vertical-align: top;">Criteria</td> <td style="vertical-align: top;"> <ol style="list-style-type: none"> 1 The integration of a displayed single-digit fingerprint is at the issuing State or organization's discretion. 2 The displayed single-digit fingerprint SHALL be either an original created on the MRTD substrate by the holder or, 3 a digitally printed reproduction of an original. 4 <i>Orientation.</i> The displayed single-digit fingerprint SHALL be displayed horizontal to the longer edge of the MRTD. The top of the finger SHALL be that portion of the single-digit fingerprint furthest away from the reference edge of the MRTD.) 5 <i>Colour.</i> The displayed single-digit fingerprint SHALL be displayed in a colour that affords a definite contrast to the background. 6 <i>Borders.</i> Borders or frames to outline the displayed single-digit fingerprint SHALL NOT be permitted. </td> <td style="vertical-align: top;"> <table border="0"> <tr><td style="text-align: center;">O</td></tr> <tr><td style="text-align: center;">C/M</td></tr> <tr><td style="text-align: center;">C/M</td></tr> <tr><td style="text-align: center;">M</td></tr> <tr><td style="text-align: center;">O</td></tr> <tr><td style="text-align: center;">M</td></tr> </table> </td> <td style="vertical-align: top;">P.F.Ob.</td> </tr> </table>	Criteria	<ol style="list-style-type: none"> 1 The integration of a displayed single-digit fingerprint is at the issuing State or organization's discretion. 2 The displayed single-digit fingerprint SHALL be either an original created on the MRTD substrate by the holder or, 3 a digitally printed reproduction of an original. 4 <i>Orientation.</i> The displayed single-digit fingerprint SHALL be displayed horizontal to the longer edge of the MRTD. The top of the finger SHALL be that portion of the single-digit fingerprint furthest away from the reference edge of the MRTD.) 5 <i>Colour.</i> The displayed single-digit fingerprint SHALL be displayed in a colour that affords a definite contrast to the background. 6 <i>Borders.</i> Borders or frames to outline the displayed single-digit fingerprint SHALL NOT be permitted. 	<table border="0"> <tr><td style="text-align: center;">O</td></tr> <tr><td style="text-align: center;">C/M</td></tr> <tr><td style="text-align: center;">C/M</td></tr> <tr><td style="text-align: center;">M</td></tr> <tr><td style="text-align: center;">O</td></tr> <tr><td style="text-align: center;">M</td></tr> </table>	O	C/M	C/M	M	O	M	P.F.Ob.		
			Criteria	<ol style="list-style-type: none"> 1 The integration of a displayed single-digit fingerprint is at the issuing State or organization's discretion. 2 The displayed single-digit fingerprint SHALL be either an original created on the MRTD substrate by the holder or, 3 a digitally printed reproduction of an original. 4 <i>Orientation.</i> The displayed single-digit fingerprint SHALL be displayed horizontal to the longer edge of the MRTD. The top of the finger SHALL be that portion of the single-digit fingerprint furthest away from the reference edge of the MRTD.) 5 <i>Colour.</i> The displayed single-digit fingerprint SHALL be displayed in a colour that affords a definite contrast to the background. 6 <i>Borders.</i> Borders or frames to outline the displayed single-digit fingerprint SHALL NOT be permitted. 	<table border="0"> <tr><td style="text-align: center;">O</td></tr> <tr><td style="text-align: center;">C/M</td></tr> <tr><td style="text-align: center;">C/M</td></tr> <tr><td style="text-align: center;">M</td></tr> <tr><td style="text-align: center;">O</td></tr> <tr><td style="text-align: center;">M</td></tr> </table>	O	C/M	C/M	M	O	M	P.F.Ob.			
O															
C/M															
C/M															
M															
O															
M															
Remarks:	<p>Check position and measure size of displayed single-digit fingerprint.</p> <p>Check for borders of displayed single-digit fingerprint.</p> <p>Criterion 5 is optional (O) although it makes use of a SHALL-statement, because no detailed test procedure is specified. I.e. the assessment is subjective.</p>														

3.4 Machine Readable Zone (MRZ)

3.4.2 Properties of the MRZ

Ref	Part	§	Requirement(s)	M.O.C.N	Issuer profile	Status P. F. Ob.						
17	3	4.2	Properties of the MRZ	M								
			<table border="1"> <thead> <tr> <th>Criteria</th> <th></th> </tr> </thead> <tbody> <tr> <td>1</td> <td>The data in the MRZ must be visually readable as well as machine readable.</td> </tr> <tr> <td>2</td> <td>The OCR characters in the MRZ SHALL be machine readable at least in the near infrared portion of the spectrum (i.e. the B900 band defined in [ISO 1831, Section 3.2]). (See also [ISO/IEC 30116, Section 6.3.2].)</td> </tr> </tbody> </table>	Criteria		1	The data in the MRZ must be visually readable as well as machine readable.	2	The OCR characters in the MRZ SHALL be machine readable at least in the near infrared portion of the spectrum (i.e. the B900 band defined in [ISO 1831, Section 3.2]). (See also [ISO/IEC 30116, Section 6.3.2].)	M M		P.F.
Criteria												
1	The data in the MRZ must be visually readable as well as machine readable.											
2	The OCR characters in the MRZ SHALL be machine readable at least in the near infrared portion of the spectrum (i.e. the B900 band defined in [ISO 1831, Section 3.2]). (See also [ISO/IEC 30116, Section 6.3.2].)											
			<p>Remarks: Check if the MRZ is visible under IR-Light and daylight (e.g. D50 light chamber)</p> <p>Note: There is no exact criteria for visibility, yet. Manufacturers should take a selection of off-the-shelf OCR-B decoders and ensure that for each decoder at least 19 out of 20 reading trials are successful.</p>									

3.4.3 Constraints of the MRZ

Ref	Part	§	Requirement(s)	M.O.C.N	Issuer profile	Status P. F. Ob.
18	3	4.3	Constraints of the MRZ	M		
			Criteria			P.F.
			1 Only the common set of characters as specified in Figure 4 of [Doc9303-3, Figure 4] SHALL be used	M		
2 No diacritical marks are used	M					
		Remarks:	The “Max Length of the Data elements” is specified in Section 4.2 of [Doc9303-4, Section 4.2]			

3.4.4 Print Specifications

Ref	Part	§	Requirement(s)	M.O.C.N	Issuer profile	Status P. F. Ob.
19	3	4.4	Print Specifications	M		
			Criteria			P.F.
			1 Machine readable data SHALL be printed in OCR-B type font, size 1, constant stroke width characters, at a fixed width spacing of 2.54 mm (0.1 in), i.e. horizontal printing density of 10 characters per 25.4 mm (1.0 in).	M		
		Remarks:				

3.4.5 Machine Reading Requirements and the Effective Reading Zone

Ref	Part	§	Requirement(s)	M.O.C.N	Issuer profile	Status P. F. Ob.
20	3	4.5	<p>Machine Reading Requirements and the Effective Reading Zone The nominal description of the measurement SHALL be as specified in ISO/IEC 30116</p> <p>Criteria</p> <p>1 Location of the MRZ 2 Location of the ERZ</p> <p>Dimensions in millimetres (inch dimensions in parentheses)</p> <p>Figure 1: Schematic diagram of the MRTD effective reading zone</p>	M		
			Remarks:	M		P.F.

3.4.6 Convention for Writing the Name of the Holder

Ref	Part	§	Requirement(s)	M.O.C.N	Issuer profile	Status P. F. Ob.
21	3	4.6	Convention for Writing the Name of the Holder	M		
			<p>Criteria</p> <p>1 To achieve global interoperability, the primary and secondary identifiers in the MRZ SHALL conform to the number of character positions available.</p> <p>2 The issuing State or organization SHALL transliterate national characters using only the allowed OCR-B characters and/or truncate, as specified in of [Doc9303-4, Section 4.2.2], see test case 15 on [Doc9303-4] in this document.</p> <p>3 The primary identifier SHALL be written in the MRZ as specified in Section 4.2.2 of [Doc9303-4], see test case 15 on [Doc9303-4] in this document.</p> <p>4 The primary identifier SHALL be followed by two filler characters (<<).</p> <p>5 The secondary identifier SHALL be written starting in the character position immediately following the two filler characters.</p> <p>6 If the primary or secondary identifiers have more than one name component, each component SHALL be separated by a single filler character (<).</p> <p>7 When all components of the primary and secondary identifiers with the required filler characters do not exceed 39 characters in total, all unused character positions SHALL be completed with filler characters (<).</p> <p>8 If the primary and secondary identifiers exceed the available character positions, then truncation SHALL be carried out using the procedure set out in Section 4.2.2 of [Doc9303-4], see test case 15 on [Doc9303-4] of this document. In all other cases, the name SHALL NOT be truncated.</p> <p>9 Prefixes and suffixes, including titles, professional and academic qualifications, honours, awards, and hereditary status (such as Dr., Sir, Jr., Sr., II and III) SHALL NOT be included in the MRZ except where the issuing State considers these to be legally part of the name. In such cases, prefixes or suffixes SHALL be represented as components of the secondary identifier(s).</p> <p>10 Numeric characters SHALL NOT be used in the name fields of the MRZ.</p>	M		P.F.

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Author: ISO/JTC1/SC17/WG3/TF4D for ICAO-NTWG

			<p>11 Punctuation characters SHALL NOT be part the MRZ. Where these appear as part of a name, they SHALL be treated as follows:</p>	M		
			<p>12 <i>Apostrophe:</i> This SHALL be omitted; name components separated by the apostrophe SHALL be combined, and no filler character SHALL be inserted in its place in the MRZ.</p> <p><i>Example</i> VIZ: D'ARTAGNAN MRZ: DARTAGNAN</p>	M		
			<p>13 <i>Hyphen:</i> Where a hyphen appears between two name components, it SHALL be represented in the MRZ by a single filler character (<). (i.e. hyphenated names shall be represented as separate components).</p> <p><i>Example</i> VIZ: MARIE-ELISE MRZ: MARIE<ELISE</p>	M		
			<p>14 <i>Comma:</i> Where a comma is used in the VIZ to separate the primary and secondary identifiers, the comma SHALL be omitted in the MRZ, and the primary and secondary identifiers SHALL be separated in the MRZ by two filler characters (<<).</p> <p><i>Example</i> VIZ: ERIKSSON, ANNA MARIA MRZ: ERIKSSON<<ANNA<MARIA</p>	M		
			<p>15 Otherwise, where a comma is used in the VIZ to separate two name components, it SHALL be represented in the MRZ as a single filler character (<).</p> <p><i>Example</i> VIZ: ANNA, MARIA MRZ: ANNA<MARIA</p>	M		
			<p>16 <i>Other punctuation characters:</i> All other punctuation characters SHALL be omitted from the MRZ (i.e. no filler character SHALL be inserted in their place in the MRZ).</p>	M		

			Remarks:	Check the usage of prefixes and suffixes in the name according to the Implementation Conformance Statement, see Table 1. Transliteration tables for the most commonly used Latin, Cyrillic and Arabic families of languages are provided in Section 6 of [Doc9303-3].			
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3.4.7 Representation of Issuing State or Organization and Nationality of Holder

Ref	Part	§	Requirement(s)	M.O.C.N	Issuer profile	Status P. F. Ob.	
22	3	4.7	Representation of Issuing State or Organization and Nationality of Holder	M			
			Criteria 1	The three-letter codes referenced in Section 5 of [Doc9303-3] SHALL be used to complete the fields for the issuing State or organization and the nationality of the holder in the MRZ. See also [ISO 3166-1]	M		P.F.
			Remarks:				

3.4.8 Representation of Dates

Ref	Part	§	Requirement(s)	M.O.C.N	Issuer profile	Status P. F. Ob.
23	3	4.8	Representation of Dates	M		
		Criteria				P.F.
		1	Dates in the MRZ of the MRTD SHALL be shown as a six-digit string consisting of the last two digits for the year (YY) immediately followed by two digits for the number of the month (MM) and by two digits for the day (DD). The structure is as follows: YYMMDD.	M		
		2	If all or part of the date of birth is unknown, the relevant character positions SHALL be completed with filler characters (<).	M		
		Remarks:	Following this format, 12 July 1942 will be shown as: 420712.			

3.4.9 Check Digits in the MRZ

Ref	Part	§	Requirement(s)	M.O.C.N	Issuer profile	Status P. F. Ob.
24	3	4.9	Check Digits in the MRZ	M		
		Criteria				P.F.
		1	A check digit consists of a single digit computed from the other digits in a series. Check digits in the MRZ SHALL be calculated on specified numerical data elements in the MRZ. The check digits permit readers to verify that data in the MRZ is correctly interpreted.	M		
		2	The check digits SHALL be calculated on modulus 10 with a continuously repetitive weighting of 731 731 ..., as follows: Step 1. Going from left to right, multiply each digit of the pertinent numerical data element by the weighting figure appearing in the corresponding sequential position. Step 2. Add the products of each multiplication. Step 3. Divide the sum by 10 (the modulus). Step 4. The remainder shall be the check digit.	M		
		3	For data elements in which the number does not occupy all available character positions, the symbol < SHALL be used to complete vacant positions and shall be given the value of zero for the purpose of calculating the check digit.	M		
		4	When the check digit calculation is applied to data elements containing alphabetic characters, the characters A to Z SHALL have the values 10 to 35 consecutively, as specified in Section 4.9 of [Doc9303-3].	M		
		Remarks:	Data elements included in the check digit calculation and check digit location for each document type are contained in the form factor specific Part 4 of [Doc9303-4]. Examples of check digit calculation are found in Informative Appendix A to [Doc9303-3]. Test case 16 on [Doc9303-4] specifies tests for the check digit calculation.			

4 Physical Conformity Test Specifications to [Doc9303-4]

4.2 Construction and Dimensions of the MRP and MRP Data Page

4.2.1 Construction

Ref	Part	§	Requirement(s)	M.O.C.N	Issuer profile	Status P. F. Ob.
1	4	2.1	Construction	M		
			Criteria 1	The MRP SHALL take the form of a book consisting of a cover and a minimum of eight pages.	M	P.F.Ob.
			2	It SHALL include a data page onto which the issuing State or organization enters the personal data relating to the holder of the document and data concerning the issuance and validity of the MRP.	M	
			3	After issuance no additional pages SHALL be added to the MRP.	M	
Remarks:	Confirm the number of pages in the document including a personalized datapage. Verify that no additional pages are included in the document.					

4.2.2 MRP Data Page Edge Tolerances

Ref	Part	§	Requirement(s)	M.O.C.N	Issuer profile	Status P. F. Ob.
2	4	2.2 2.3	MRP Data Page Edge Tolerances	M		
			Criteria 1	The edges of the data page following final preparation SHALL be within the area circumscribed by concentric rectangles. Inner rectangle: 87.25 mm × 124.25 mm (3.44 in × 4.89 in) Outer rectangle: 88.75 mm × 125.75 mm (3.49 in × 4.95 in)	M	P.F.Ob.
			Remarks:	Refer to [Doc9303-4], Figure 1 for additional information. Measure the dimensions of the data page.		

4.2.4 MRP Data Page Margins

Ref	Part	§	Requirement(s)	M.O.C.N	Issuer profile	Status P. F. Ob.
3	4	2.4 3.3	MRP Data Page Margins	M		
			Criteria 1	A margin of 2.0 mm (0.08 in) along the left and right hand edges and top edge MUST be left clear of data except for background security printing.	M	P.F.Ob.
			Remarks:	Refer to [Doc9303-4], Figure 2 for additional information. Measure the dimensions of the data page. See also [Doc9303-4], Section 3.3 Note 3 on Figure 7		

4.2.5 MRP Data Page Thickness

Ref	Part	§	Requirement(s)	M.O.C.N	Issuer profile	Status P. F. Ob.
4	4	2.5	MRP Data Page Thickness	M		
			Criteria	The thickness, including any final preparation (e.g. laminate), SHALL be as follows :	O M M	P.F.Ob.
			1	- Minimum: No minimum thickness is specified. (see remarks)		
	2	- Maximum: 0.90 mm (0.035 in).				
	3	- The thickness of the area within the machine readable zone SHALL NOT vary by more than 0.10 mm (0.004 in).				
	Remarks:	Measure the overall thickness of the data page within the machine readable zone. Thickness below 0.15 mm (0.006 in) MAY not be adequately robust. Any observation to this effect SHOULD be noted.				

4.2.6 MRP Dimensions

Ref	Part	§	Requirement(s)	M.O.C.N	Issuer profile	Status P. F. Ob.	
5	4	2.6	MRP Dimensions	O			
			Criteria 1	The dimensional specifications defined in [Doc9303-4] paragraphs 2.2 to 2.3 above also apply to the MRP book. If required for binding purposes: -The 88.0 mm (3.46 in) dimension MAY be increased.	O		P.F.Ob.
			Remarks:				

4.3 GENERAL LAYOUT OF THE MRP DATA PAGE

Ref	Part	§	Requirement(s)	M.O.C.N	Issuer profile	Status P. F. Ob.	
6	4	3	GENERAL LAYOUT OF THE MRP DATA PAGE	M/O			
			Criteria 1	The MRP data page SHOULD either be an inner page in close proximity to an end leaf of the MRP or form part of the cover of the MRP. Note the recommendation of [Doc9303-2, Section A.5.1.3]: Although definitely not recommended, if an inside cover is used as a biographical data page (see [Doc9303-2, Section A.5.5.1), alternative measures must be employed to achieve an equivalent level of security against all types of attack as provided by locating the data page on an inside page.	O		P.F.Ob.
			2	Where the MRP data page is not constructed as part of the cover, the RECOMMENDED practice is to locate the MRP data page on page 2 or on the penultimate page of the MRP.			

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			Remarks:	Verify the position of the data page within the document's construction. Testers SHALL document and report their observations.		

4.3.2.1. Zone IV — Location of holder's signature or usual mark

Ref	Part	§	Requirement(s)	M.O.C.N	Issuer profile	Status P. F. Ob.
7	4	3.2.1	Zone IV — Location of holder's signature or usual mark	M/O		
			Criteria 1 Where the holder's signature or usual mark is located on a page other than the front of the MRP data page, the size of adjacent fields in the visual zone on the MRP data page MAY be increased.	0		P.F.Ob.
			Remarks: Visual confirmation of the signature or usual mark in Zone IV or alternatively in Zone VI. Testers SHALL document and report their observations.			

4.3.2.2. Zone V — Position of holder’s portrait

Ref	Part	§	Requirement(s)	M.O.C.N	Issuer profile	Status P. F. Ob.
8	4	3.2.2	Zone V — Position of holder’s portrait	M		
			Criteria			P.F.Ob.
			<ol style="list-style-type: none"> 1 Within Zone V, the holder’s portrait SHALL be at least 2.0 mm (0.08 in) from the left-hand edge of the MRP data page. 2 The use of affixed or stick-on portrait photos is not permitted and these SHALL NOT be used. Instead, the portrait image SHALL be integrated with the biodata page. 	M	M	
Remarks:	Measure the location of the photo and visually confirm that the photograph is integrated within the data page. Testers SHALL document and report their observations.					

4.3.2.4. Mandatory zones

Ref	Part	§	Requirement(s)	M.O.C.N	Issuer profile	Status P. F. Ob.
9	4	3.2.4	Mandatory zones	M/O/C		
			Criteria			P.F.Ob.
<ol style="list-style-type: none"> 1 The MRP data page SHALL contain Zones I, II, III, V and VII. 2 If the issuing State’s or organization’s practice is to omit mandatory elements 01 and 02 (issuing State or organization, in full, and document, in full) from the header (Zone I), these data elements shall be placed on an adjacent or preceding page. 3 Zone IV SHALL be present either on the data page or on an adjacent page and contain the holder’s signature or usual mark, i.e. original or reproduction. 4 Alternatively, the holder’s signature or usual mark MAY be located in Zone VI on the reverse side of the MRP data page. 	M	C/M				
			M			
				O		

			<p>4 Zone V SHALL include the personal identification feature(s) which SHALL include a portrait solely of the rightful holder.</p> <p>5 The name fields in Zone II and the holder's signature or usual mark in Zone IV MAY overlay Zone V provided this does not hinder recognition of the data in any of the three zones.</p> <p>6 Data elements SHOULD appear in a standard sequence as shown in Figures 4 and 5. Figure 6 is a schematic of the nominal layout of data elements on the front side of an MRP data page, and Figure 7 is a template for the position of the personalized data fields.</p> <p>7 The dimensions and boundaries of Zone VII, the machine readable zone, are fixed. Zone VII conforms in height to the MRZ defined for all MRTDs so that the machine readable data lines fall within the effective reading zone (ERZ) specified in [Doc9303-3].</p>	M		
			<p>Remarks: Refer to in [Doc9303-4], Figures 4, 5, 6 and 7 for additional reference diagrams. Visually confirm the standard sequence of elements and layout, recognizing that each MAY be adjusted according to the needs of individual States. This test MAY be used for observations on the sequence of data elements (criterion 6) and the visualization of recommended practices. Testers SHALL document and report their observations.</p>	O		

4.3.2.5. Optional data zone

Ref	Part	§	Requirement(s)	M.O.C.N	Issuer profile	Status P. F. Ob.
10	4	3.2.5	Optional data zone	O		
			<p>Criteria 1 Zone VI, which MAY be on the back of the data page or on an adjacent page, is a zone for OPTIONAL data.</p>	O		P.F.Ob.
			<p>Remarks: Visually inspect the document for the location of Zone VI (if included). Testers SHALL document and report their observations.</p>			

4.3.3 Dimensional Flexibility of Zones I to V

Ref	Part	§	Requirement(s)	M.O.C.N	Issuer profile	Status P. F. Ob.
11	4	3.3	Dimensional Flexibility of Zones I to V	M/O/C		
			<p>Criteria</p> <p>1 Zones I to V MAY be adjusted in size and shape within the overall dimensional specifications of the MRP data page to accommodate the diverse requirements of issuing States or organizations.</p> <p>2 All zones SHALL be bounded by straight lines, and all angles where straight lines join SHALL be right angles (i.e. 90 degrees).</p> <p>3 It is RECOMMENDED that the zone boundaries not be printed on the MRP data page.</p> <p>4 An MRP data page that contains a transparent or otherwise unprintable border will result in a reduction of the available area within the zones. The full MRP data page dimensions and zone boundaries SHALL be measured from the outside edge of this border, which is the external edge of the MRP data page.</p> <p>5 Zone I SHALL be located along the top edge of the MRP data page and extend across the full 125.0 ± 0.75 mm (4.92 ± 0.03 in) dimension. (The top edge is the edge coincident with the spine of the MRP.)</p> <p>6 The vertical dimension of Zone I MAY vary as required,</p> <p>7 This vertical dimension of Zone I SHALL NOT be greater than 17.9 mm (0.70 in).</p> <p>8 Zone V SHALL be located such that its left edge is coincident with the left edge of the MRP data page as shown in Figure 8. The dimensions of the portrait contained in Zone V are specified in Section 4.1.1.1, the Visual Data Element Directory, Field 19.</p> <p>9 Zone V MAY move vertically along the left edge of the MRP data page and overlay a portion of Zone I as long as individual details contained in either zone are not obscured.</p> <p>10 The upper boundary of Zone II SHALL be coincident with the lower boundary of Zone I.</p> <p>11 Zone II MAY extend up to the full 125.0 ± 0.75 mm (4.92 ± 0.03 in) dimension of the MRP data page.</p>	<p>O</p> <p>M</p> <p>O</p> <p>M</p> <p>M</p> <p>O</p> <p>M</p> <p>M</p> <p>O/C</p> <p>M</p> <p>O</p>		P.F.Ob.

			<p>12 If the full dimension is used, Zone II SHALL overlay a portion of Zone V. In this case, issuing States or organizations SHALL ensure that data contained in either zone is not obscured.</p> <p>13 The lower boundary of Zone II MAY be positioned at the discretion of the issuing State or organization.</p> <p>14 Enough space MUST be left for Zones III and IV below the boundary. This boundary does not need to be straight across the 125.0 ± 0.75 mm (4.92 ± 0.03 in) dimension of the MRP data page.</p> <p>15 To allow for variations during manufacture of the MRP, a tolerance of ± 1.0 mm (± 0.04 in) is allowed for the 23.2 mm (0.91 in) dimension of the MRZ and within that overall tolerance the boundary between the VIZ and the MRZ SHALL NOT be skewed more than 0.5 mm (0.02 in) over the 125.0 mm (4.92 in) dimension.</p> <p>16 Zone III SHOULD start at the right vertical boundary of Zone V and MAY extend to the right edge of the MRP data page.</p> <p>17 If Zone IV is placed on the MRP data page, it SHALL be at the bottom of the VIZ on the front of the MRP data page, its lower boundary coincident with the top edge of the MRZ.</p> <p>18 Zone IV MAY also overlay Zone V, though this practice is not RECOMMENDED. In this case, individual details contained in either zone SHALL NOT be obscured.</p> <p>19 When the document includes a displayed image of an MRP holder's fingerprint, the image MAY be displayed within the area designated for Zone II.</p>	O		
				O		
				M		
				M		
				O		
				C/M		
				O		
				O		
		Remarks:	Refer to Part 4 for additional information including Notes 1-4 on Figure 7 pertaining to tolerance information and Figures 7, 8, 9, 10, 13, 14. Note any relevant adjustments to the size and shape of fields, recognizing that flexibility is permitted. Identify any variance(s) against the MANDATORY and/or OPTIONAL criteria. Testers SHALL document and report their observations.			

4.4 CONTENTS OF THE MRP DATA PAGE

4.4.1 Visual Inspection Zone (VIZ) (Zones I through VI)

4.4.1.1 Data element directory

4.4.1.1.1 Visual inspection zone — Data element directory

Ref	Part	§	Requirement(s)				M.O.C.N	Issuer profile	Status P. F. Ob.
12	4	4	CONTENTS OF THE MRP DATA PAGE				M/O		P.F.Ob.
		4.1	Visual Inspection Zone (VIZ) (Zones I through VI)						
		4.1.1	<i>Data element directory</i>						
		4.1.1.1	<i>Visual inspection zone — Data element directory</i>						
			Criteria	Field/Zone no. in VIZ	Data element	Specifications	Number of characters	References and notes*	
			1	01/I (Mandatory)	Issuing State or organization	Name displayed in full.	Variable	Notes a, c, d, g. If omitted, SHALL appear on an adjacent or preceding page in the passport.	M
			2	02/I (Mandatory)	Document	The word for “passport” in the language of the issuing State or organization, plus either PASSPORT (English), PASSEPORT (French) or PASAPORTE (Spanish) if the language of the issuing State or organization is not English, French or Spanish.	Variable	Notes a, c, d, g. If omitted, SHALL appear on an adjacent or preceding page in the passport.	M

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			3	03/I (Mandatory)	Document code	Capital letter P to designate an MRP. One additional capital letter MAY be used, in the character position after the letter P and at the discretion of the issuing State or organization, to designate other types of passports such as MRP issued to diplomatic staff, an MRP issued for travel on government business, or a passport issued for a special purpose.	2	Notes a, g, I.	M		
			4	04/I (Mandatory)	Issuing State or organization (in code)	As abbreviated in three-letter code specified in [Doc9303-3].	3 Fixed	Notes a, I.	M		
			5	05/I (Mandatory)	Passport Number	As given by the issuing State or organization to uniquely identify the document from all other MRTDs issued by the State or organization.	9	Notes a, b, c, g, I.	M		
			6	06/07/II (Mandatory)	Name	The full name of the holder, as identified by the issuing State or organization. For additional details see details as described in test case 4 on [Doc9303-3].	Variable	Notes a, c, g, k, I. Check if Fields 06 and 07 were utilized as a single field	M		
			7	06/II (Mandatory)	Primary Identifier	Predominant component(s) of the name of the holder according to test case 4 on [Doc9303-3]. In cases where the predominant component(s) of the name of the holder (e.g. where this consists of composite names) cannot be shown in full or in the same order, owing to space limitations of Field(s) 06	Variable	Notes a, c, g, k, I.	M		

				and/or 07 or national practice, the most important component(s) (as determined by the State or organization) of the primary identifier SHALL be inserted.							
			8	07/II (Mandatory)	Secondary Identifier	Secondary component(s) of the name of the holder according to test case 4 on [Doc9303-3]. The most important component(s) (as determined by the State or organization) of the secondary identifier of the holder SHALL be inserted in full, up to the maximum dimensions of the field frame. Other components, where necessary, MAY be represented by initials. Where the holder's name has only predominant component(s), this data field SHALL be left blank. A State MAY optionally utilize the whole zone comprising Fields 06 and 07 as a single field. In such a case, the primary identifier SHALL be placed first, followed by a comma and a space, followed by the secondary identifier.	Variable	Notes a, c, g, k, l.	M		
			9	08/II (Mandatory)	Nationality	For details see test case 6 on [Doc9303-3].	Variable	Notes a, c, f, g, l, o.	M		
			10	09/II (Mandatory)	Date of birth	Holder's date of birth as recorded by the issuing State or organization. If the date of birth is unknown, see test case 8 on [Doc9303-3] for guidance.	Variable	Notes a, b, c, g, l.	M		
			11	10/II (Optional)	Personal number	Field optionally used for personal identification number given to holder by the issuing State or organization. For additional details see [Doc9303-3].	Variable	Notes a, b, c, e, g.	O		

			12	11/II (Mandatory)	Sex	Sex of the holder, to be specified by use of the single initial commonly used in the language of the State or organization where the document is issued and, if translation into English, French or Spanish is necessary, followed by an oblique and the capital letter F for female, M for male, or X for unspecified.	3	Notes a, c, g, l, p.	M		
			13	12/II (Optional element in mandatory zone)	Place of birth	Field optionally used for city and State of the holder's birthplace. For details see test case 7 on [Doc9303-3].	Variable	Notes a, c, e, f, g.	O		
			14	13/II (Optional element in mandatory zone)	Optional personal data elements	Optional personal data elements e.g. personal identification number or fingerprint, at the discretion of the issuing State or organization. If a fingerprint is included in this field, it SHOULD be presented as a 1:1 representation of the original. If a date is included it shall follow test case 8 on [Doc9303-3].	Variable	Notes a, b, c, e, g, i.	O		
			15	14/III (Mandatory)	Date of issue	For details see test case 8 on [Doc9303-3].	Variable	Notes a, b, c, g, i, l.	M		
			16	15/III (Mandatory)	Authority or issuing organization	Authority or issuing organization for the MRP. This field SHALL be used to indicate the issuing authority or issuing organization and, optionally, its location, which MAY be personalized within this field. For additional details see test case 5 on [Doc9303-3].	Variable	Notes a, b, c, g, j, l.	M/O		

			17	16/III (Mandatory)	Date of expiry	Date of expiry of the MRP. For additional details see test case 8 on [Doc9303-3].	Variable	Notes a, b, c, g, i.	M			
			18	17/III Optional element in mandatory zone	Optional document data elements	Optional data elements relating to the document. For additional details see [Doc9303-3].	Variable	Notes a, b, c, e, g.	O			
			19	18/IV (Mandatory)	Holder's signature or usual mark	At the discretion of the issuing State or organization, the signature or usual mark MAY be located in Zone VI. The size of the field to be allocated to the signature or usual mark on the adjoining page SHALL be at the discretion of the issuing State or organization, subject to the overall dimensional limits of the MRP. For additional details see test case 15 on [Doc9303-3].	Variable	Notes e, j.	O			
			20	19/V (Mandatory)	Identification feature	This field SHALL contain a portrait of the holder. The position of the field concerned SHALL be aligned to the left of Zones II, III and IV. For details see test cases 9 – 14 on [Doc9303-3] and [ISO/IEC 39794-5].		Note d.	M			
			21	20/VI (Optional)	Optional data elements	Additional optional data elements at the discretion of the issuing State or organization. For additional details see [Doc9303-3].		Notes a, b, c, e, g, i.	O			
			Remarks:	Verify the MANDATORY and OPTIONAL content of Zones I through VI using the referenced test cases. Verify the use of three-letter codes in MRZ and VIZ according to [Doc9303-3], Section 5.								

4.4.1.1.2 Card access number

Ref	Part	§	Requirement(s)	M.O.C.N	Issuer profile	Status P. F. Ob.
13	4	4.1.1.2	Card access number	O		
		Criteria				P.F.Ob.
		1	For MRPs containing a contactless IC, issuing States or organizations MAY, at their discretion, wish to include a Card Access Number (CAN) on the datapage or the page adjacent to the datapage to facilitate machine reading and data capture from the chip. Specifically, the purpose of the CAN is to enable the chip to be accessed without reading the MRZ. When the chip supports PACE, this can be accomplished by adding a CAN. The CAN and its position within the MRP are specified as follows.	O		
		2	The CAN is a 6-digit number, comprised solely of numerals, 0 to 9. There is no check digit since the check is implicitly performed by the protocol.	M		
		3	The CAN SHOULD include a field caption.	O		
		4	Recognizing that the issuing State or organizations have diverse requirements for the layout of the VIZ, the CAN SHALL appear on either the data page or the page adjacent to the data page, and should appear in the VIZ.	M		
		5	The horizontal and vertical position SHALL be at the discretion of the issuing State or organization, but shall not overlap the portrait area (Zone V) or interfere with the legibility of other data in the VIZ.	M		
		6	Font, field and background SHOULD conform to the specifications for the MRZ set out in [Doc9303-3].	O		
		Remarks:	Further information concerning the technical specifications, derivation and implementation of CANs may be found in [Doc9303-11].			

4.4.2 Machine Readable Zone (MRZ) (Zone VII)

4.4.2.1 Data position, data elements and print position in the MRZ

Ref	Part	§	Requirement(s)	M.O.C.N	Issuer profile	Status P. F. Ob.
14	4	4.2	Machine Readable Zone (MRZ) (Zone VII)	M/O		
		4.2.1	Data position, data elements and print position in the MRZ			
		4.2.1.1	Criteria 1 <i>Data Position</i> - The MRZ is located on the front of the MRP data page. Figure 3 of [Doc9303-4] defines the location of the MRZ and the nominal position of the data therein.		M	P.F.Ob.
		4.2.1.3	2 <i>Print position</i> - The position of the left-hand edge of the first character SHALL be 6.0 ± 1.0 mm (0.24 ± 0.04 in) from the left-hand edge of the document. Reference centre lines for the OCR lines and the minimum starting position for the first character of each line are shown in Figure 3 of [Doc9303-4]. The positioning of the characters is indicated by those reference lines and by the printing zones for the two code lines in Figure 7 of [Doc9303-4]		M	
Remarks:	Verify the data and the data elements of the MRZ according to the referenced figures. The reference to the mentioned centre line in the greyed out section should not be implemented, please refer to base line instead. Testers SHALL document and report their observations.					

4.4.2.2 Data structure of machine readable data for the MRP data page

4.4.2.2.1 Data structure of the upper machine readable line

Ref	Part	§	Requirement(s)					M.O.C.N	Issuer profile	Status P. F. Ob.	
15	4	4.2.2	Data structure of machine readable data for the MRP data page					M/O		P.F.Ob.	
		4.2.2.1	<i>Data structure of the upper machine readable line</i>								
		Criteria	MRZ character position	Field no. in VIZ	Data element	Specifications	Number of characters				References and notes*
		1	1 to 2	03	Document code	The first character SHALL be P to designate an MRP. One additional letter MAY be used, at the discretion of the issuing State or organization, to designate a particular MRP. If the second character position is not used for this purpose, it SHALL be filled by the filler character (<).	2				Notes a,d,
		2	3 to 5	04	Issuing State or organization	The three-letter code specified in [Doc9303-3] SHALL be used. Spaces SHALL be replaced by filler characters (<).	3				Notes a,d,f.
3	6 to 44	06, 07	Name	For details see test case 21 on [Doc9303-3]	39 [Primary identifier(s), secondary identifier(s) and fillers]	Notes a,c,d.					
4			Punctuation in the name	Punctuation is not permitted in the MRZ. For details on			M				

					apostrophes, hyphens, commas, etc., see test case 21 on [Doc9303-3].					
			5		Name prefixes and suffixes	For details see test case 21 on [Doc9303-3].			M	
			6		Filler	When all components of the primary and secondary identifiers and required separators (filler characters) do not exceed 39 characters in total, all name components SHALL be included in the MRZ and all unused character positions SHALL be completed with filler characters (<) repeated up to position 44 as required.			M	
			7		Truncation of the name	When the primary and secondary identifiers and required separators (filler characters) exceed the number of character positions available for names (i.e. 39), they SHALL be truncated as follows: - Characters SHALL be removed from one or more components of the primary identifier until three character positions are freed, and two filler characters (<<) and the first character of the first			M/C	

						<p>component of the secondary identifier can be inserted. The last character (position 44) SHALL be an alphabetic character (A through Z). This indicates that truncation MAY have occurred.</p> <p>- Further truncation of the primary identifier MAY be carried out to allow characters of the secondary identifier to be included, provided that the name field SHALL end with an alphabetic character (position 44). This indicates that truncation MAY have occurred.</p> <p>- When the name consists of only a primary identifier which exceeds the number of character positions available for the name, i.e. 39, characters SHALL be removed from one or more components of the name until the last character in the name field is an alphabetic character.</p>					
				8	* Notes can be found following paragraph 4.2.2.2.						
				Remarks:	Verify the data structure of upper MRZ line in reference to position, specification and number of characters Verify content according to notes.						

4.4.2.2.2 Data structure of the lower machine readable line

Ref	Part	§	Requirement(s)					M.O.C.N	Issuer profile	Status P. F. Ob.	
16	4	4.2.2.2	<i>Data structure of the lower machine readable line</i>					M/O		P.F.Ob.	
			Criteria	MRZ character positions (line 2)	Field no. in VIZ	Data element	Specifications	Number of characters	References and notes*		
			1	1 to 9	05	Passport number	As given by the issuing State or organization to uniquely identify the document. Any special characters or spaces in the passport number as shown in the VIZ SHALL be replaced by the filler character (<). The number SHALL be followed by the filler character (<) repeated up to position 9 as required.	9	Notes a,b,d.	M/O	
			2	10		Check digit	Characters of "Passport number" (1-9) shall be used to calculate the check digit as specified in [Doc9303-3] and test case 24 on [Doc9303-3] and positioned as specified in paragraph 4.2.4. at character position 10.	1	Notes b,d.	M	

			3	11 to 13	08	Nationality	As a three-letter code representing the holder's nationality as listed in [Doc9303-3]. Spaces are replaced by filler characters.	3	Notes a,d.	M		
			4	14 to 19	9	Date of birth	For details see test case 23 on [Doc9303-3].	6	Notes b,d,i.	M		
			5	20		Check digit	Characters of "Date of birth" (14-19) shall be used to calculate the check digit as specified in [Doc9303-3] and test case 24 on [Doc9303-3] and positioned as specified in paragraph 4.2.4. at character position 20.	1	Notes b,d.	M		
			6	21	11	Sex	F = female; M = male; < = unspecified.	1	Notes a,d.	M		
			7	22 to 27	16	Date of expiry	For details see test case 23 on [Doc9303-3].	6	Notes b,d,i.	M		
			8	28		Check digit	Characters of "Date of expiry" (22-27) shall be used to calculate the check digit as specified in [Doc9303-3] and test case 24 on [Doc9303-3] and positioned as specified in paragraph 4.2.4. at character position 28.	1	Notes b,d.	M		
			9	29 to 42	10	Personal number or other OPTIONAL data elements	Any special characters, including spaces in the personal identification number given to the holder by the issuing State or organization, SHALL be replaced by the filler	14	Notes a,b,d.	M/C		

						<p>character (<). The number SHALL be followed by the filler character (<) repeated up to position 42 as required.</p> <p>When the personal number field is not used, the character positions 29 to 42 in the second MRZ line SHOULD be completed with filler characters (<) (see also under "check digit", character position 43 below).</p>					
			10	43		<p>Check digit</p> <p>Characters of "Personal number" (29-42) SHALL be used to calculate the check digit as specified in test case 24 on [Doc9303-3] and positioned as specified in paragraph 4.2.4. at character position 43.</p> <p>When the personal number field is not used and filler characters (<) are used in positions 29 to 42, the check digit MAY be zero or the filler character (<) at the option of the issuing State or organization.</p>	1	Notes b,d.	M/C		
			11	44		<p>Composite check digit</p> <p>Calculate the composite check digit for characters of machine readable data of the lower line in positions 1 to 10, 14 to 20</p>	1	Notes b,d.	M		

							and 22 to 43, including values for letters that are a part of the number fields and their check digits. Shall be calculated as specified in test case 24 on [Doc9303-3] and placed at character position 44. Note.— Positions 11-13 and 21 are excluded when calculating the composite check digit.				
							<p>* Notes to the Visual and Machine Readable data element directories:</p> <p>12 a) Alphabetic characters (A to Z) and (a-z) as defined in [Doc9303-3]. National characters MAY be included in the VIZ. In the MRZ, only the characters defined in Doc 9303-3 SHALL be used.</p> <p>13 b) Numeric characters (0 to 9) as defined in [Doc9303-3]. National numerals MAY be additionally included in the VIZ. In the MRZ, only the numerals 0–9 MAY be used as defined in Doc 9303-3.</p> <p>14 c) Punctuation MAY be included in the VIZ. In the MRZ only the filler character specified in [Doc9303-3].MAY be used.</p> <p>15 d) The field caption is not printed on the document.</p> <p>16 e) The use of a caption to identify the field is at the option of the issuing State.</p> <p>17 g) A blank space (or spaces) is included. Blank spaces between words SHALL count towards the maximum number of characters permitted in the field.</p> <p>18 h) Intentionally omitted from the Data Element Directory. In the sixth and earlier editions of Doc 9303, this Note provided for stick-in portrait photographs the use of which is no longer permitted in an MRP.</p> <p>19 i) The method of writing dates is given in in test case 8 and 23 on [Doc9303-3].</p> <p>20 j) The space reserved for Field 15 MAY be expanded to include additionally the space for Field 18 when the option is taken of locating the holder’s signature or usual mark on the adjacent page. In this instance, the authority or issuing organization MAY be expressed as two lines of variable numbers of character positions.</p> <p>21 k) When the name cannot be accommodated in the space provided for it in the VIZ, a notation giving the full name MAY be written on another page of the MRP. Alternatively, a smaller type font MAY be selected for use in the VIZ only.</p>				

			<p>22 l) The field caption SHALL be printed on the document.</p> <p>23 p) Where an issuing State or organization does not want to identify the sex, the filler character (<) shall be used in this field in the MRZ and an X in this field in the VIZ.</p>			
			<p>Remarks: Verify the data structure of lower MRZ line in reference to position, specification and number of characters. Verify content according to notes. Calculate check digit calculation according to [Doc9303-3] and test case 23 on [Doc9303-3]</p>			

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