



American Association of
Motor Vehicle Administrators



MOBILE DL

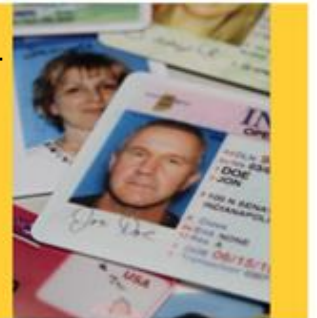
Mobile Driver's License

Implementation Guidelines: AAMVA mDL Data Element Set

1.0

Document Version

The Implementation Guidelines provide guidance to jurisdictions on mobile driver's license administration. This document specifically addresses the AAMVA mDL data element set.





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The American Association of Motor Vehicle Administrators (AAMVA) is a nonprofit organization, representing the state and provincial officials in the United States and Canada who administer and enforce motor vehicle laws.



American Association of
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1 INTRODUCTION

AAMVA’s Joint mobile driver’s license (mDL) Working Group has been active in the area of mobile identification since 2012. As the mDL evolves, the mDL WG continues to identify and address topics on which guidance to Issuing Authorities can be helpful. The results are documented in the AAMVA mDL Implementation Guidelines.

One of the areas addressed by the AAMVA mDL Implementation Guidelines is qualifications of the ISO/IEC 18013-5 data element set. These qualifications further restrict existing requirements (preserving interoperability), and add domestic data elements by way of the AAMVA namespace.

The FDIS version of ISO/IEC 18013-5 has recently been published for ballot. Although this is not the final International Standard yet, there are implementers and Issuing Authorities that are already moving ahead with projects using the FDIS text.

The current version of the AAMVA mDL Implementation Guidelines has been withdrawn, and the release of the next version is scheduled to coincide with the publication of ISO/IEC 18013-5 as an International Standard. To address the need of implementers and Issuing Authorities that are already moving ahead based on the FDIS version of ISO/IEC 18013-5, this document publishes version 1 of the AAMVA mDL data element set.

2 ISO/IEC 18013-5 DATA ELEMENT SET QUALIFICATIONS

This section specifies changes and additions to the ISO/IEC FDIS 18013-5 data element set to accommodate the unique needs of the AAMVA community¹. The existing ISO/IEC FDIS 18013-5 data element set, together with the changes and additions specified in this document, comprise the AAMVA mDL data element set.

Replace the 1st sentence of clause 7.2.1 with the following: “The mDL data elements shall be as defined in Table 5. Data elements belong to the namespaces indicated.”

In Table 5, apply the following amendments:

Identifier	Property to amend	Old value	New value
family_name	Definition	Last name, surname, or primary identifier, of the mDL holder. The value shall only use latin1 ^b characters and shall have a maximum length of 150 characters.	Family name (commonly called surname or last name), or primary identifier, of the individual that has been issued the driver license or identification document. If the individual’s name is not divided into family name and given name(s), that name shall be deemed the family name or primary identifier. The value shall only use A, N or S characters ^c and shall have a maximum length of 40 characters.

¹ Reader devices developed for use within the AAMVA community support ISO/IEC 18013-5 as published, as well as the modifications specified in this document.

Identifier	Property to amend	Old value	New value
given_name	Definition	<p>First name(s), other name(s), or secondary identifier, of the mDL holder.</p> <p>The value shall only use latin1^b characters and shall have a maximum length of 150 characters.</p>	<p>Given name or names (includes all of what are commonly referred to as first and middle names), or secondary identifier, of the individual that has been issued the driver license or identification document.</p> <p>The value shall only use A, N or S characters^c and shall have a maximum length of 80 characters.</p>
issuing_authority	Definition	<p>Issuing authority name.</p> <p>The value shall only use latin1^b characters and shall have a maximum length of 150 characters.</p>	<p>Issuing authority name.</p> <p>The value shall only use latin1^b characters and shall have a maximum length of 150 characters.</p> <p>Example: North Carolina Division of Motor Vehicles</p>
document_number	Definition	<p>The number assigned or calculated by the issuing authority.</p> <p>The value shall only use latin1^b characters and shall have a maximum length of 150 characters.</p>	<p>The number assigned or calculated by the issuing authority.</p> <p>The value shall only use A, N or S characters^c and shall have a maximum length of 25 characters.</p>
height	Presence	0	M
eye_color	Presence	0	M
age_in_years	Presence	0	M

In Table 5, add a new column titled “Namespace”. For the data elements present in ISO/IEC FDIS 18013-5, enter “org.iso.18013.5.1” for each data element.

Append the following to Table 5:

Namespace	Identifier	Meaning	Definition	Presence	Encoding format
org.iso.18013.5.1.aamva	domestic_driving_privileges	Domestic categories of vehicles/ restrictions/ conditions	Vehicle types the licence holder is authorized to operate. See 7.2.4.	M	See 7.2.4
org.iso.18013.5.1.aamva	name_suffix	Name suffix	Name suffix of the individual that has been issued the driver license or identification document. <ul style="list-style-type: none"> • JR (Junior) • SR (Senior) • 1ST or I (First) • 2ND or II (Second) • 3RD or III (Third) • 4TH or IV (Fourth) • 5TH or V (Fifth) • 6TH or VI (Sixth) • 7TH or VII (Seventh) • 8TH or VIII (Eighth) • 9TH or IX (Ninth) 	O	tstr
org.iso.18013.5.1.aamva	audit_information	Audit information	A string of letters and/or numbers that identifies when, where, and by whom the credential was initially provisioned. The value shall only use A, N or S characters ^c and shall have a maximum length of 25 characters.	O	tstr
org.iso.18013.5.1.aamva	organ_donor	Organ donor	An indicator that denotes whether or not the credential holder is an organ donor. <ul style="list-style-type: none"> • 1: Donor 	O	uint
org.iso.18013.5.1.aamva	veteran	Veteran	An indicator that denotes whether or not the credential holder is a veteran. <ul style="list-style-type: none"> • 1: Veteran 	O	uint

Namespace	Identifier	Meaning	Definition	Presence	Encoding format
org.iso.18013.5.1.aamva	aamva_version	AAMVA version number	A number identifying the version of the AAMVA mDL data element set. The number of the version described in this document is 1.	M	uint
org.iso.18013.5.1.aamva	family_name_truncation	Family name truncation	A code that indicates whether the field has been truncated (T), has not been truncated (N), or unknown whether truncated (U).	M	tstr
org.iso.18013.5.1.aamva	given_name_truncation	Given name truncation	A code that indicates whether either the first name or the middle name(s) have been truncated (T), has not been truncated (N), or unknown whether truncated (U).	M	tstr
org.iso.18013.5.1.aamva	aka_family_name	Alias / AKA family name	Other family name by which credential holder is known. The value shall only use A, N or S characters ^c and shall have a maximum length of 40 characters.	O	tstr
org.iso.18013.5.1.aamva	aka_given_name	Alias / AKA given name	Other given name by which credential holder is known. The value shall only use A, N or S characters ^c and shall have a maximum length of 75 characters.	O	tstr
org.iso.18013.5.1.aamva	aka_suffix	Alias / AKA Suffix name	Other suffix by which credential holder is known. The same values as for Name suffix applies.	O	tstr

Namespace	Identifier	Meaning	Definition	Presence	Encoding format
org.iso.18013.5.1.aamva	weight_range	Weight range	<p>Indicates the approximate weight range of the cardholder:</p> <ul style="list-style-type: none"> • 0 = up to 31 kg (up to 70 lbs) • 1 = 32 – 45 kg (71 – 100 lbs) • 2 = 46 - 59 kg (101 – 130 lbs) • 3 = 60 - 70 kg (131 – 160 lbs) • 4 = 71 - 86 kg (161 – 190 lbs) • 5 = 87 - 100 kg (191 – 220 lbs) • 6 = 101 - 113 kg (221 – 250 lbs) • 7 = 114 - 127 kg (251 – 280 lbs) • 8 = 128 – 145 kg (281 – 320 lbs) • 9 = 146+ kg (321+ lbs) 	O	uint
org.iso.18013.5.1.aamva	race_ethnicity	Race / ethnicity	Codes for race or ethnicity of the cardholder, as defined in AAMVA D20.	O	tstr
org.iso.18013.5.1.aamva	DHS_compliance	Compliance type	<p>DHS required field that indicates compliance:</p> <p>“F” = fully compliant; and, “N” = non-compliant</p> <p>Applicable only in the US.</p>	O	tstr
org.iso.18013.5.1.aamva	DHS_temporary_lawful_status	Limited duration document indicator	<p>DHS required field that denotes whether or not the credential holder has temporary lawful status.</p> <ul style="list-style-type: none"> • 1: Temporary lawful status <p>Applicable only in the US.</p>	O	uint
org.iso.18013.5.1.aamva	EDL_credential	EDL indicator	<p>Present if the credential is an EDL:</p> <ul style="list-style-type: none"> • 1: Driver’s license • 2: Identification card <p>Applicable only in the US.</p>	O	uint

Namespace	Identifier	Meaning	Definition	Presence	Encoding format
org.iso.18013.5.1.aamva	resident_county	Resident county	The 3-digit county code of the county where the mDL holder lives, as per the 2010 FIPS Codes for Counties and County Equivalent Entities ^d . Applicable only in the US.	O	tstr
org.iso.18013.5.1.aamva	hazmat_endorsement_expiration_date	HAZMAT endorsement expiration date	Date on which the hazardous material endorsement granted by the document is no longer valid. Applicable only in the US.	O	full-date
org.iso.18013.5.1.aamva	sex	Sex	mDL holder’s sex, see 7.2.9	M	uint
^c As defined in the AAMVA Card Design Standard. ^d Available at https://www.census.gov/library/reference/code-lists/ansi.html .					

In Table 5, the field names map to field names in the AAMVA Card Design Standard (CDS) as follow:

18013-5	AAMVA CDS
Licence number	Customer identifier
Administrative number	Audit information
Sex	Cardholder sex

Add the following to clause 7.2.4:

The domestic categories of vehicles/restrictions/conditions contain information describing the driving privileges of the mDL holder.

For data transfer the domestic categories of vehicles/restrictions/conditions shall have the following CDDL structure:

```

DomesticDrivingPrivileges = [
    * DomesticDrivingPrivilege
]

DomesticDrivingPrivilege = {
    ? "domestic_vehicle_class" : DomesticVehicleClass
    ? "domestic_vehicle_restrictions" : DomesticVehicleRestrictions
    ? "domestic_vehicle_endorsements" : DomesticVehicleEndorsements
    }
    
```

```
}

DomesticVehicleClass = {

    "domestic_vehicle_class_code" : tstr    ; Vehicle category code as per
                                           ; issuing authority rules
    "domestic_vehicle_class_description" : tstr
                                           ; Vehicle category description as
                                           ; per issuing authority rules
    ? "issue_date" : full-date             ; Date of issue encoded as
                                           ; full-date per RFC 3339
    ? "expiry_date" : full-date            ; Date of expiry encoded as
                                           ; full-date per RFC 3339

}

DomesticVehicleRestrictions = [+ DomesticVehicleRestriction]

DomesticVehicleRestriction = {

    ? "domestic_vehicle_restriction_code" : tstr
                                           ; Restriction code as per
                                           ; issuing authority rules
    "domestic_vehicle_restriction_description" : tstr
                                           ; Vehicle category description as
                                           ; per issuing authority rules

}

DomesticVehicleEndorsements = [+ DomesticVehicleEndorsement]

DomesticVehicleEndorsement = {

    ? "domestic_vehicle_endorsement_code" : tstr
                                           ; Endorsement code as per
                                           ; issuing authority rules
    "domestic_vehicle_endorsement_description" : tstr
                                           ; Vehicle endorsement description as
                                           ; per issuing authority rules

}

}
```

Because issuing authorities have to populate the standard ISO vehicle category codes in addition to populating the domestic information (rendered in the `DomesticDrivingPrivileges` structure), the following apply:

1. Verifying entities must treat the `DomesticDrivingPrivileges` as the primary source of driving privilege information.
2. When mapping domestic vehicle privileges to the standard ISO vehicle category codes, if an exact match is not available, issuing authorities should find the closest ISO category that provides less privileges. If a mapping is compiled by a vendor, the issuing authority must approve the mapping before use.
3. When a mdoc receives a request only for `DrivingPrivileges`, the user interface should make it clear to the mDL holder that, due to the mapping, the information shared may convey less privileges than would have been conveyed by the domestic codes.

4. When a mdoc receives a request for both `DrivingPrivileges` and `DomesticDrivingPrivileges`, the mdoc must respond (given approval by the mDL holder) at least with the `DomesticDrivingPrivileges`.

NOTE 4 Readers located in North America and with the ability to process the AAMVA mDL data element set are expected to ask for both `DrivingPrivileges` and `DomesticDrivingPrivileges`. This is because the reader will not know if the mdoc supports `DomesticDrivingPrivileges` but would expect that it often will. The intent of #4 above is to, in this case, share the domestic data the reader is looking for. How the request is presented to the mDL holder, and how approval to share is administered, is left to implementers. Nevertheless, a simple approach could be for a reader to ignore the request for `DrivingPrivileges` and to only ask for approval to share `DomesticDrivingPrivileges` (given that both were requested).

Add a new clause 7.2.9:

7.2.9 Sex

An additional element for sex is defined in the `org.iso.18013.5.1.aamva` namespace. In line with the AAMVA Card Design Specification, this element can have the following values:

- 1: Male
- 2: Female
- 9: Not specified

NOTE 1 The addition of `org.iso.18013.5.1.aamva.sex` is necessitated by the different meaning assigned to value 9 in AAMVA systems (compared to in `org.iso.18013.5.1.sex`). Although the meaning currently is arguably not too different (“Not specified” vs. “Not applicable”), the difference in meaning could increase in future versions of the `org.iso.18013.5.1.aamva` namespace.

Readers located in North America and with the ability to process the AAMVA mDL data element set are expected to ask for both `org.iso.18013.5.1.sex` and `org.iso.18013.5.1.aamva.sex`. This is because the reader will not know if the mdoc supports `org.iso.18013.5.1.aamva.sex` but would expect that it often will. The intent of #4 above is to, in this case, share the domestic data the reader is looking for. How the request is presented to the mDL holder, and how approval to share is administered, is left to implementers. Nevertheless, a simple approach could be for a reader to ignore the request for `org.iso.18013.5.1.sex` and to only ask for approval to share `org.iso.18013.5.1.aamva.sex` (given that both were requested).

Since the AAMVA mDL data element set includes two data elements for sex, the following apply:

1. Verifying entities must treat `org.iso.18013.5.1.aamva.sex` as the primary source of sex information.
2. If an mDL supports `org.iso.18013.5.1.sex`, the element must have the same value as `org.iso.18013.5.1.aamva.sex`.

3. When a mdoc receives a request only for org.iso.18013.5.1.sex, if a value of 9 is stored, the user interface should make it clear to the mDL holder that the information shared carries a different meaning compared to org.iso.18013.5.1.aamva.sex.
4. When a mdoc receives a request for both org.iso.18013.5.1.sex and org.iso.18013.5.1.aamva.sex, the mdoc must respond (given approval by the mDL holder) at least with org.iso.18013.5.1.aamva.sex.

NOTE 2 Readers located in North America and with the ability to process the AAMVA mDL data element set are expected to ask for both org.iso.18013.5.1.sex and org.iso.18013.5.1.aamva.sex. This is because the reader will not know if the mdoc supports org.iso.18013.5.1.aamva.sex but would expect that it often will. The intent of #4 above is to, in this case, share the domestic data the reader is looking for. How the request is presented to the mDL holder, and how approval to share is administered, is left to implementers. Nevertheless, a simple approach could be for a reader to ignore the request for org.iso.18013.5.1.sex and to only ask for approval to share org.iso.18013.5.1.aamva.sex (given that both were requested).

RELEASE HISTORY

Document Version	Date	Name	Comments
1.0	2021/07/30	AAMVA	Initial release of the AAMVA mDL data element set version 1.