Content Developer Kit
Collision and Mechanical Parts Vector Illustrations w/Part Numbers
Vehicle Key - ACES

V1.2

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1 Description

The MOTOR Parts Vector Illustrations dataset provides exploded views of vehicle parts; each image representing a vehicle system or assembly. The delivery consists of vector (.SVG) illustrations, and the XML data files that provide the vehicle and part application data for the illustrations and the parts called out in the illustrations. This document focuses on the XML data files.

The application data is delivered in XML data files that utilize the ACES 3.0 Delivery Spec and Schema that can be found in the documentation package at http://www.autocare.org/what-we-do/technology/technologyhelp/. The package file ACES-Delivery_Spec_Version_3.0.pdf contains a sample starting on page 31 which closely resembles this product. The MOTOR Parts Vector Illustrations dataset contains the following features that are not described in the Auto Care Association documentation.

- The data does contain any part quantities. The Qty elements are included in App elements because they are required, but they do not contain any values.
- The part numbers included are all of the part numbers from our source data that apply to the callout and image. When more than one part number applies, all the part numbers are concatenated into a single string and delimited by a comma.
- The ACES 3.0 schema will fail when validating against these files because of the length of concatenated part numbers. Your copy of the schema should be updated to remove the length restriction on the Part element before validating the files against the schema.
- The Asset elements contain Note elements that described the Group and SubGroup of each illustration which can be used for creating illustration selection navigation.
- App and Asset elements can contain child Note elements that have an id attribute value. This value is a reference to the MOTOR_Qualifier.xml file provided. This standardized qualifier list is used in place of the AAIA Qdb standard.
- In cases where our source data has not been mapped to PCdb data, we will include the value of 99999 for the id attribute in the PartType element.
- The PartType element value will contain the part description from our source data. This value does not come from the Part table in PCdb, though the id attribute value does.

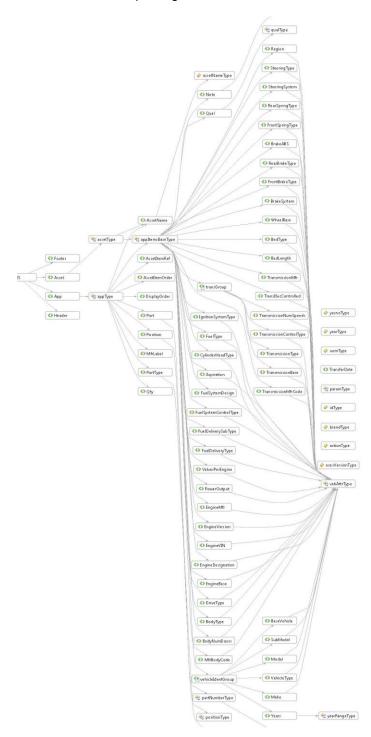The part application data will be delivered in multiple files, each containing the data for a unique AAIA Make. The MOTOR Qualifier standard data is delivered in a file named MOTOR_Qualifier.xml. The delivery also contains the schema file for MOTOR Qualifier.

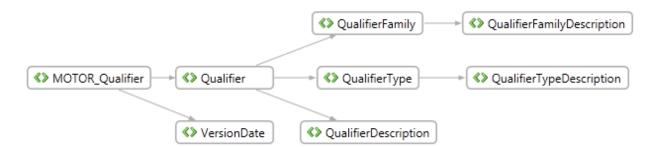# 2 XML Schema

2.1   ACES 3.0 XML File

See documentation package for schema file.

2.2   MOTOR Qualifier

See MOTOR_Qualifier.xsd for more details.

3 Data Dictionary

3.1.1   File: MOTOR_Parts_Vector_Illustrations_[AAIA Make].xml

#	Element name	Content Type	Content Model	Attributes	Element Reqd.	Attribute Reqd.	Description
1	**ACES**	Elements	(Header , App+ , Footer)	version	Yes	Yes	Root element, attribute version indicates the specification version number
2	**Header**	Elements	(Company , SenderName , SenderPhone , SenderPhoneExt? , TransferDate , MfrCode? , DocumentTitle , DocFormNumber? , EffectiveDate , ApprovedFor? , SubmissionType , MapperCompany? , MapperContact? , MapperPhone? , MapperPhoneExt? , MapperEmail? , VcdbVersionDate , QdbVersionDate? , PcdbVersionDate ,		Yes		Header section describes data file information such as supplier, effective date, various data elements version dates etc.
3	Company	Type	String		Yes	N/A	Data supplier company name, MOTOR Information Systems
4	SenderName	Type	String		Yes	N/A	Data supplier contact person name
5	SenderPhone	Type	String		Yes	N/A	Data supplier contact person phone number
6	SenderPhoneExt	Type	String		No	N/A	Data supplier contact person extension phone number

7	TransferDate	Type	String		Yes	N/A	Data file create date, formatted as "CCYY-MM-DD", where "CC" is represents century, "YY" represents two digit year and "MM" represents two digit month and "DD" represents two digit day.
8	MfrCode	Type	String		No	N/A	Vehicle manufacturer code
9	DocumentTitle	Type	String		Yes	N/A	Brief description of the contents in the document
10	DocFormNumber	Type	String		No	N/A	Data supplier's document number, if available
11	EffectiveDate	Type	String		Yes	N/A	Date on which the data contents in the file are effective from. Formatted as "CCYY-MM-DD", where "CC" is represents century, "YY" represents two digit year and "MM" represents two digit month and "DD" represents two digit day.
12	ApprovedFor	Type	String		No	N/A	ISO country code for which the data is approved for. For US market the code is "US" and for Canada it is "CA"
13	SubmissionType	Type	String		Yes	N/A	Data submission type, TEST, FULL or UPDATE. If the submission type is TEST or FULL, all applications in the file must have "action" attribute "A" to indicate "add" records. If the submission type is UPDATE, the "action" attribute can be either "A" for "add" records or "D"

							for "deleted" records. For the updated records, there will be two applications one with action attribute "D" and other with action attribute "A". By default, MOTOR Information Systems will deliver data in FULL.
14	MapperCompany	Type	String		No	N/A	Name of the company that mapped the data to AAIA standard data
15	MapperContact	Type	String		No	N/A	Contact person from the mapping
16	MapperPhone	Type	String		No	N/A	Mapping contact person's phone number
17	MapperPhoneExt	Type	String		No	N/A	Mapping contact person's extension phone number
18	MapperEmail	Type	String		No	N/A	Mapping contact person's e-mail address
19	VcdbVersionDate	Type	String		Yes	N/A	Version date from Vcdb database. Formatted as "CCYY-MM-DD", where "CC" is represents century, "YY" represents two digit year and "MM" represents two digit month and "DD" represents two digit day.
20	QdbVersionDate	Type	String		No	N/A	Version date from Qdb database, if it is used in this data deliverable. Formatted as "CCYY-MM-DD", where "CC" is represents century, "YY" represents two digit year and "MM" represents two digit month and "DD" represents two digit day.
21	PcdbVersionDate	Type	String		Yes	N/A	Version date from Pcdb database. Formatted as

								"CCYY-MM-DD", where "CC" is represents century, "YY" represents two digit year and "MM" represents two digit month and "DD" represents two digit day.
23	**App**		Elements	(BaseVehicle , SubModel? , MfrBodyCode? , BodyNumDoors? , BodyType? , DriveType? , EngineBase? , EngineDesignation? , EngineVIN? , EngineVersion? , EngineMfr? , ValvesPerEngine? , FuelDeliveryType? , FuelDeliverySubType? , FuelSystemControlType? , FuelSystemDesign? , Aspiration? , CylinderHeadType? , FuelType? , IgnitionSystemType? , TransmissionMfrCode? , (TransmissionBase | (TransmissionType? , TransmissionControlType? , TransmissionNumSpeeds?))? , TransElecContolled? , TransmissionMfr? , TransferCaseBase? , TransferCase? , TransferCaseMfr? , BedLength? , BedType? , WheelBase? , BrakeSystem? , FrontBrakeType? , RearBrakeType? , BrakeABS? , FrontSpringType? , RearSpringType? , SteeringSystem? , SteeringType? ,	action	Yes	Yes	The values attribute "**action**" are "A" for "add" and "D" for "delete" applications. The attribute "**id**" uniquely identifies the application.
					id		Yes	
					ref		No	The optional "**validate**" attribute indicates if the application must be validated against Vcdb data. Possible values "yes" and "no".
					validate		No	

			RestraintType? , Region? , Qual* , Note* , Qty, PartType, MfrLabel? , Position? , DisplayOrder?, AssetName?, AssetItemOrder?, AssetItemRef?)?				
	BaseVehicle	Type	String	id	Yes	Yes	References the Base Vehicle table in Vcdb database. The attribute "**id**" indicates the BaseVehicleID
	SubModel	Type	String	id	No	Yes	References the SubModel table in Vcdb database. The attribute "**id**" indicates the SubModelID.
	MfrBodyCode	Type	String	id	No	Yes	References the MfrBodyCode table. The attribute "**id**" indicates the MfrBodyCodeID
	BodyNumDoors	Type	String	id	No	Yes	References the BodyNumDoors table. The attribute "**id**" indicates the BodyNumDoorsID
	BodyType	Type	String	id	No	Yes	References the BodyType table. The attribute "**id**" indicates the BodyTypeID
	DriveType	Type	String	id	No	Yes	References the DriveType table. The attribute "**id**" indicates the DriveTypeID
	EngineBase	Type	String	id	No	Yes	References the EngineBase table. The attribute "**id**" indicates the EngineBaseID
	EngineDesignation	Type	String	id	No	Yes	References the EngineDesignation table. The attribute "**id**" indicates the

							EngineDesignationID.
	EngineVIN	Type	String		id	No	Yes	References the EngineVIN table. The attribute "**id**" indicates the EngineVINID.
	EngineVersion	Type	String		id	No	Yes	References the EngineVersion table. The attribute "**id**" indicates the EngineVersionID.
	EngineMfr	Type	String		id	No	Yes	The manufacturer that actually built the engine. References the Mfr table. The attribute "**id**" indicates the MfrID.
	ValvesPerEngine	Type	String		id	No	Yes	References the Valves table. The attribute "**id**" indicates ValvesID.
	FuelDeliveryType	Type	String		id	No	Yes	References the FuelDeliveryType table. The attribute "**id**" indicates FuelDeliveryTypeID.
	FuelDeliverySubType	Type	String		id	No	Yes	References the FuelDeliverySubType table. The attribute "**id**" indicates FuelDeliverySubTypeID
	FuelSystemControlType	Type	String		id	No	Yes	References the FuelSystemControlType table. The attribute "**id**" indicates FuelSystemControlTypeID
	FuelSystemDesign	Type	String		id	No	Yes	References the FuelSystemDesign table. The attribute "**id**" indicates FuelSystemDesignID
	Aspiration	Type	String		id	No	Yes	References the Aspiration table. The attribute "**id**" indicates AspirationID

CylinderHeadType	Type	String		id	No	Yes	References the CylinderHeadType table. The attribute "**id**" indicates CylinderHeadTypeID
FuelType	Type	String		id	No	Yes	References the FuelType table. The attribute "**id**" indicates FuelTypeID
IgnitionSystemType	Type	String		id	No	Yes	References the IgnitionSystemType table. The attribute "**id**" indicates IgnitionSystemTypeID
TransmissionMfrCode	Type	String		id	No	Yes	References the TransmissionMfrCode table. The attribute "**id**" indicates TransmissionMfrCodeID
TransmissionBase	Type	String		id	No	Yes	References the TransmissionBase table. The attribute "**id**" indicates TransmissionBaseID
TransmissionType	Type	String		id	No	Yes	References the TransmissionType table. The attribute "**id**" indicates TransmissionTypeID
TransmissionControlType	Type	String		id	No	Yes	References the TransmissionControlType table. The attribute "**id**" indicates TransmissionControlType ID
TransmissionNumSpeeds	Type	String		id	No	Yes	References the TransmissionNumSpeeds table. The attribute "**id**" indicates TransmissionNumSpeeds ID
TransElecContolled	Empty			id	No	Yes	References the

							ElecControlled table. The attribute "**id**" indicates ElecControlledID
TransmissionMfr	Type	String		id	No	Yes	The manufacturer that actually built the transmission. References the Mfr table. The attribute "**id**" indicates MfrID
TransferCaseBase	Type	String		id	No	Yes	References the TransferCaseBase table. The attribute "**id**" indicates TransferCaseBaseID
TransferCase	Type	String		id	No	Yes	References the TransferCase table. The attribute "**id**" indicates TransferCaseID
TransferCaseMfr	Type	String		id	No	Yes	The manufacturer that actually built the Transfer Case. References the Mfr table. The attribute "**id**" indicates MfrID
BedLength	Type	String		id	No	Yes	References the BedLength table. The attribute "**id**" indicates BedLengthID
BedType	Type	String		id	No	Yes	References the BedType table. The attribute "**id**" indicates BedTypeID
WheelBase	Type	String		id	No	Yes	References the WheelBase table. The attribute "**id**" indicates WheelBaseID
BrakeSystem	Type	String		id	No	Yes	References the BrakeSystem table. The attribute "**id**" indicates BrakeSystemID
FrontBrakeType	Type	String		id	No	Yes	The brake type used on the front wheels. References the

							BrakeType table. The attribute "**id**" indicates BrakeTypeID
	RearBrakeType	Type	String	id	No	Yes	The brake type used on the rear wheels. References the BrakeType table. The attribute "**id**" indicates BrakeTypeID
	BrakeABS	Type	String	id	No	Yes	References BrakeABS table. The attribute "**id**" indicates BrakeABSID
	FrontSpringType	Type	String	id	No	Yes	The basic suspension type used in the front of the vehicle. References the SpringType table. The attribute "**id**" indicates SpringTypeID
	RearSpringType	Type	String	id	No	Yes	The basic suspension type used in the rear of the vehicle. References the SpringType table. The attribute "**id**" indicates SpringTypeID
	SteeringSystem	Type	String	id	No	Yes	References the SteeringSystem table. The attribute "**id**" indicates SteeringSystemID
	SteeringType	Type	String	id	No	Yes	References the SteeringType table. The attribute "**id**" indicates SteeringTypeID
	RestraintType	Type	String	id	No	Yes	References the RestraintType table. The attribute "**id**" indicates RestraintTypeID
	Region	Type	String	id	No	Yes	Region where sold. References the Region table. The attribute "**id**" indicates RegionID

Qual	Elements	(param* , text)		id	No	Yes	**Not Used.** Qdb coded qualifier data. The attribute "**id**" references the Qdb table. Sub-elements include one or more optional "**param**" tag and a required "**text**" tag.
param	Type	String		value	Yes	Yes	**param** substitutes the value and **uofm** for Qdb qualifiers
				uom		No	
				altvalue		No	
				altuom		No	
text	Type	String		id	No	Yes	Additional qualifier text for the coded qualifier
Note	Type	String		id	No	No	Note element describes MOTOR Qualifiers for the application. The attribute "id" refers to the attribute "**Qualifier.id**" in MOTOR_Qualifier.xml file "vehicleattribute" indicates if the MOTOR Qualifier is vehicle attribute not covered by ACES specs.
				lang		No	
				displayorder		No	Asset elements will always have at least two notes; one with the prefix "Group: " and another with the prefix "SubGroup: ." These, along with an optional third note "SubGroupQualifier: " contains the textual information required to navigate to a desired illustration.
							App elements may have

							children Note elements with prefix of "PartQualifier: ." These are source data free form text qualifiers that may or may not be represented by included VCdb Attributes or MOTOR Qualifiers.
	Qty	Type	String			Yes	N/A	Quantity for specified part. Does not apply and value is left empty.
	PartType	Type	String	id		Yes	Yes	Reference to the PCdb Part table. In cases where the data is not mapped to PCdb, a value of "99999" is used. The value provided is the source data textual description of the part, not the PCdb description.
	MfrLabel	Type	String			No	N/A	**Not Used:** Manufacturer specific descriptions, if its available.
	Position	Type	String	id		No	Yes	References the AAIA Position table. (Part of the relational PCDB). The attribute "**id**" indicates PositionID
	DisplayOrder	Type	String			No	Yes	Display order sequence number, when its required to display data in specific order.
	AssetName	Type	String			No	N/A	File name, less the file extension, of the svg referenced by the Asset or App.
	AssetItemOrder	Type	String			No	N/A	Not Used.
	AssetItemRef	Type	String			No	N/A	Call out in the Illustration

								that the App information is referencing.
23	**Asset**	Elements	(BaseVehicle , SubModel? , MfrBodyCode? , BodyNumDoors? , BodyType? , DriveType? , EngineBase? , EngineDesignation? , EngineVIN? , EngineVersion? , EngineMfr? , ValvesPerEngine? , FuelDeliveryType? , FuelDeliverySubType? , FuelSystemControlType? , FuelSystemDesign? , Aspiration? , CylinderHeadType? , FuelType? , IgnitionSystemType? , TransmissionMfrCode? , (TransmissionBase | (TransmissionType? , TransmissionControlType? , TransmissionNumSpeeds?))? , TransElecContolled? , TransmissionMfr? , TransferCaseBase? , TransferCase? , TransferCaseMfr? , BedLength? , BedType? , WheelBase? , BrakeSystem? , FrontBrakeType? , RearBrakeType? , BrakeABS? , FrontSpringType? , RearSpringType? , SteeringSystem? , SteeringType? , RestraintType? , Region? , Qual* , Note* , AssetName?,)?	action id ref validate	Yes	Yes Yes No No	The values attribute "**action**" are "A" for "add" and "D" for "delete" applications. The attribute "**id**" uniquely identifies the application. The optional "**validate**" attribute indicates if the application must be validated against Vcdb data. Possible values "yes" and "no".
	Footer	Type	String			No	N/A	Container for footer tags, current specs calls for Record count, which

							indicates total number of App and Asset elements in the file
	RecordCount	Type	String		No	N/A	Indicates the number of App and Asset elements in the file

3.1.2   File: MOTOR_Qualifier.xml

When more than one image or image callout exists for a given set of VCdb attributes (Such as Base Vehicle or Engine Config) and PCdb attributes (such as part type and position), MOTOR Qualifiers are often used to provide an additional level of distinction. MOTOR Qualifiers cover information not represented in PCdb or VCdb, such as "With Air Conditioning" or "To MM/DD/YYYY". The Qualifier ID, Qualifier Type ID, and Qualifier Family ID are all persistent, and the related textural description will not conceptually change. For example, a qualifier description may be updated from "With Cruise" to "With Cruise Control", but it would not be changed to "With Park Distance Control".

#	Element name	Content Type	Content Model	Attributes	Element Reqd.	Attribute Reqd.	Description
1	MOTOR_Qualifier	Elements	(VersionDate , Qualifier+)		Yes		MOTOR Qualifier root element
2	VersionDate	EMPTY		schema	Yes	Yes	Attribute "**schema**" indicates the schema version date (see date format note below)
				extraction		Yes	Attribute "**extraction**" indicates the extraction date (see date format note below)
				mtp		No	Attribute "**mtp**" indicates the MOTOR taxonomy version date, if applicable (see date format note below)
3	Qualifier	Elements	(QualifierDescription+ , QualifierType , QualifierFamily)	id	Yes	Yes	Attribute "**id**" is unique for each MOTOR qualifier description, this **id** is

							referenced in the application data.
4	QualifierDescription	Elements	string	lang	Yes	No	MOTOR Qualifier description The attribute "lang" indicates the language for the description, default language is English. Descriptions can be multiple, each with different "**lang**" attribute
5	QualifierType	Elements	(QualifierTypeDescription+)	id	Yes	Yes	MOTOR Qualifier type
6	QualifierTypeDescription	Elements	string	lang	Yes	No	MOTOR Qualifier type description The attribute "**lang"** indicates the language for the description, default language is English. Descriptions can be multiple, each with different "**lang**" attribute
7	QualifierFamily	Elements	(QualifierFamilyDescription+)	id	Yes	Yes	MOTOR Qualifier Family
8	QualifierFamilyDescription	Elements	string	lang	Yes	No	MOTOR Qualifier family description The attribute "**lang**" indicates the language for the description, default language is English. Descriptions can be multiple, each with different "**lang**" attribute

4 Document

Document History

Date	Version	Change Reference
09//2010	1.0	Initial release
10//2013	1.1	Updated MOTOR Qualifier Section
08/2015	1.2	Updated link to ACES documentation

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