AAP ACES Reference Manual

Version 3.0

Content Services

Revised 06/4/2018

General Information

In an effort to reduce cataloging discrepancies and to improve application data accuracy Advance Auto Parts (AAP) is requiring all its supplier partners to support the Automotive Aftermarket Industry Association industry standards for communicating Catalog information through the Aftermarket Catalog Exchange Standard (ACES). In order for our supplier partners to share catalog information via ACES They must have certain skill sets and capabilities.

In the following documentation, we will discuss the AAP requirements, standards, and guidelines that the supplier must follow. It is also the supplier's responsibility to review and understand the attached ACES Version 3.1 Delivery Specifications (PDF file) prior to delivery of ACES files to AAP.

Third Party Assistance

If suppliers do not currently possess these skill sets and capabilities, there are numerous third party vendors that can assist them with products and services to help them gain these core competencies. One place to start your search for help is the Service Providers section on the Auto Care Association web site.
After suppliers have built their ACES file with all of the Auto Care Association and additional AAP required tags, they may submit the file to AAP for processing. If the file fails the validation checks AAP has put in place, AAP will reject the file and provide a rejection/error report to the supplier so corrections can be made. The supplier may then submit their ACES file again. If this second ACES file also fails to pass the AAP validation checks, AAP may require the supplier to seek the assistance of a third party data service company.

Aftermarket Catalog Exchange Standards (ACES)

This specification was designed with extensive input from a broad coalition of participants in the Automotive Aftermarket, including all of the leading electronic catalog companies. The objective was to arrive at a standard sufficient to meet the needs of the widest variety of trading partners. With a widely accepted industry standard for the exchange of applications catalog data, the number of proprietary methods of coding and exchange can be reduced, lessening the cost and time delays associated with supporting multiple formats. Some of the rules in the standard allow flexibility in how data is formatted and exchanged. Specific data partners may impose requirements in how the standard is practiced with them. But it is essential for the industry to follow the standard as closely as possible if the full business value is to be realized. Please visit The Auto Care Association web site to gain a better understanding of this standard:

http://www.autocare.org

From time to time the Auto Care Association will implement updates to ACES that will necessitate a new version number (the current ACES version is 3.1) If a new ACES version is released, AAP will notify its suppliers of the expected time frame that they will have to switch to the new ACES version. A switch to a new ACES version will be

a minimum time period of three (3) months. However, depending on the complexity of the changes it may be longer than three (3) months.

Auto Care Association Membership

A supplier and or the third party data provider must be a member of Auto Care Association in order to download the necessary databases needed to deliver ACES data.

Membership Information: http://www.autocare.org/Membership/join-us/

List of Electronic Documents

The following electronic documents are included with this AAP ACES Reference Manual:

- ACES Version 3.1 Delivery Specifications (PDF file)
- AAP SFTP Authorization Form (Excel file)
- AAP Sample ACES File (XML file)

ACES General Training

All application suppliers should go through the ACES Training offered by Autocare and the University of the Aftermarket. There are ACES Training courses available on-line for a nominal fee. The course is called "Aftermarket Data Standards".

https://www.northwood.edu/corporate/universityoftheaftermarket/course-calendar

Email Address and Web Links

The following is a list of popular links that will help you with ACES.

AAP ACES Team Email Address:
CatalogContent@advance-auto.com
When to use:
Questions and assistance

AAP SFTP Site:
205.132.9.201 port 50415
When to use:
Submitting ACES files

Autocare Association Website: http://www.autocare.org

University of the Aftermarket: http://www.northwood.edu/aftermarket/

Sending ACES Files to AAP

Once your PIES/PILS file has been accepted, suppliers must send ACES files to AAP via AAP's SFTP site.

FTP Access Procedure (all suppliers)

This procedure will allow the supplier to get a Username and Password to gain access to the AAP FTP site. This process must be completed by all AAP suppliers and must be completed before the supplier can submit an ACES file via FTP. **(If you have already completed this form for your PIES submission you DO NOT need to submit again).** Submitting files to the AAP FTP site will avoid any issues with email limitations due to the size of the files. This procedure uses the AAP PIM FTP Authorization Form which is an Excel file. This file is included in the AAP Supplier ACES On-Boarding Packet.

This procedure consists of these steps:

Step 1. AAP will send each supplier an AAP PIM FTP Authorization Form which is
an Excel spreadsheet file. This file titled "FTPAccess.xls" is included in AAP
Supplier ACES On-Boarding Packet that was emailed to each supplier.

Step 2. The supplier will open the AAP PIM FTP Authorization Form file and fill in the information.

Step 3. The supplier will rename their FTP Access Authorization Form file using
the following naming convention:
CompanyName_VendorNumber_FTPAccess_DateTimeStamp.XLS
The DateTimeStamp format is MMDDYYYYHHMMSS
Example File Name:
"EastPennManufacturingCompany_429384_FTPAccess_09302009103005.XLS"

Step 4. The supplier will email the file to AAP at the following address:
aappimteam@advance-auto.com

Step 5. After AAP processes the form, AAP will email the supplier their username
and password for the AAP FTP site.

Listed below are all of the ACES tags that are required by AAP. Please refer to the attached ACES Version 3.1 Delivery Specifications (PDF file) to view all tags before submitting ACES files to AAP.

Tag Name	Attribute	AAP Req.	Discussion	Example
ACES	version	Structure Required	Root element. Top level document tag. The version attribute should contain the ACES version number (currently "1.0" or "2.0").	<ACES version="2.0"> <Header>...</Header> <App>...</App> <Asset>...</Asset> <Footer>...</Footer> </ACES>
BrandAAIAID	None ACES 3.1	Header Required	The default brand for the file. This element is optional but strongly recommended. It is a 4 character reference to the "Brand Code" level of the AAIA Parent/Brand table.	<BrandAAIAID>BBBB</BrandAAIAID>
Company	None	Header Required	The company delivering the data.	<Company>ACME Mfg.</Company>
Sender Name	None	Header Required	Contact name at the company	<SenderName>John Doe<SenderName>
Sender Phone	None	Header Required	Contact phone number	<SenderPhone>111-111-1111<SenderPhone>
DocumentTitle	None	Header Required	Catalog name or other identifying information	<DocumentTitle>ACME Brake Hardware</DocumentTitle>
EffectiveDate	None	Header Required	The date shown on the catalog. Format is CCYY-MM-DD where "CC" represents the century, "YY" the year, "MM" the month and "DD" the day. Zero fills if necessary.	<EffectiveDate>2000-06-01</EffectiveDate>
Footer	None	Structure Required	Occurs after the last application tag in the file. Used as a container for footer tags.	<Footer> ... </Footer>
Header	None	Structure Required	Occurs at the beginning of the file before any application tags. Used as a container for header tags.	<Header> ... </Header>
Part	BrandAAIAID	App Required	The part number as it should be displayed to the user. The optional BrandAAIAID attribute is used to override the default brand defined in the Header. It is a 4 character reference to the "Brand Code" level of the AAIA Parent/Brand table.	<Part BrandAAIAID="BBBB">P192-12</Part>
PartType	id	App Required	A reference to the AAIA PCDB.	<PartType id="15"/>

Tag Name	Attribute	AAP Req.	Discussion	Example

PcdbVersionDate	*None*	<mark>Header Required</mark>	Contains value of PcdbVersionDate from the PCDB Version table used to create the Transfer File. Format is YYYY-MM-DD where "YYYY" is the year, "MM" the month and "DD" the day. Zero fills if necessary.	<PcdbVersionDate>2001-02-15 </PcdbVersionDate>
QdbVersionDate	*None*	<mark>Header Required</mark>	Contains value of QdbVersionDate from the VCDB Version table used to create the Transfer File. Format is YYYY-MM-DD where "YYYY" is the year, "MM" the month and "DD" the day. Zero fills if necessary.	<QdbVersionDate>2001-02-15 </QdbVersionDate>
Qty	*None*	<mark>App Required</mark>	A required value to denote the number of parts required at that position for the application.	<Qty>1</Qty>
RecordCount	*None*	<mark>Footer Required</mark>	The actual number of application tags contained in the file.	<RecordCount>5</RecordCount>
SubmissionType	*None*	<mark>Header Required</mark>	FULL or TEST.	<SubmissionType>FULL </SubmissionType>
TransferDate	*None*	<mark>Header Required</mark>	When the transfer file was created. Format is CCYY-MM-DD where "CC" represents the century, "YY" the year, "MM" the month and "DD" the day. Zero fills if necessary.	<TransferDate>2001-02-15 </TransferDate>
VcdbVersionDate	*None*	<mark>Header Required</mark>	Contains value of VcdbVersionDate from the VCDB Version table used to create the Transfer File. Format is YYYY-MM-DD where "YYYY" is the year, "MM" the month and "DD" the day. Zero fills if necessary.	<VcdbVersionDate>2001-02-15 </VcdbVersionDate>

AAP Transfer File Naming Convention
The file name should include the company, a short catalog title, the delivery date (yyyy-mm-dd) and the word "FULL", or "TEST" all separated by underlines and an "xml" extension. AAP will

not accept "UPD" (Update) files. "FULL" complete replacement files ONLY. Consistent naming convention will allow better vendor performance tracking.

For example: ACMESupply_BrakeHardware_2001-01-18_FULL.xml

When delivering one or more Transfer Files, use an archiving program (such as WinZip, or Windows XP "Compressed (zipped) Folders") to compress the files into a single ZIP archive. Name the archive as above but without the catalog title and with a ".zip" extension. (**Note**, to remain compatible with older versions, use only classic pkzip "deflate" format, not PPMd or bzip2 formats now available in WinZip 10 and later).

ACES Versions Currently Accepted

- 2.0 (IF YOU ARE USING 2.0 YOU MUST HAVE THE BRANDID IN THE MFRCODE TAG INCLUDED IN THE HEADER)
- 3.0
- 3.1
- 3.2

ACES Compliant

ACES file that meets XML standards, Auto Care requirements, AAP required tags, and AAP record validation.

ACES Certified

Once AAP has deemed the supplier "Compliant", the next step is to become "Certified" by AAP. "Certified" means that the supplier's data meets AAPs quality level and expectations.

- All ACES files submitted should be using the most current versions of the VCDB, PCDB, and QDB.
- No use of VCDB attributes in the "Note" tag i.e. Manual Transmission
- No use of PCDB position ids referenced in the "Note" tag i.e. Rear
- Irrelevant (Overpopulation)VCDB attributes i.e. engine base attribute for Wipers
- See Data Quality review under AAP Data Validation

AAP ACES XML Schema Validation Process

Once the file is received from the vendor via the FTP site, it is validated against the ACES XML schema.

If the file fails schema validation, the file Status populates with 'Failed Schema Validation'. If a system error is encountered during validation, the file Status populates with 'Errors During Validation'.

Regardless of status, information on the errors encountered will be communicated back to the vendors via email.

If schema validation is successful, the file proceeds to Data Validation.

AAP Data Validation

Files undergo several types of validations when being loaded. Some validations are configurable upon implementation. The validations described below are the validations that generate errors and prevent records from importing. In order to meet specific business needs, the handling of the errors can be configured and additional validations can be added.

AAP File Level Validations

File level validations deal with the file as a whole, rather than as individual records. If a file level error is encountered, no further action is taken with the file. The vendor will be communicated to via email with detailed reports on errors. Record level validations are not performed and the file cannot be move forward.

- Schema Validation: The input file must pass the ACES 3.0 schema validation supplied by the Auto Care Association.
- One Brand ID per file. Brand ID delivered in Header only. AAP does not Brand ID accept at the app level.

AAP Record Level Validations

Record level validations are applied to each record individually to assess the validity, quality, and status of the application record. If a record level error is encountered, the record containing the error does not import. However, the presence of the error does not prevent any other records from importing.

Record Validity

Record validity checks are performed to ensure that all data specified in an application record is plausible, meaning that the part must exist in AAP's product information system (PIM) and be consistent with other data supplied, and that the base vehicle must exist with the options specified.

- Base Vehicle: The base vehicle specified in any application record must exist in the VCDB. Note that if Make/Model/Year is supplied in place of base vehicle, these specifications must match a valid configuration in the VCDB.
  - o Error if invalid ID provided: Invalid BaseVehicleID: [BaseVehicleID].
  - o Error if no ID provided: BaseVehicle missing.
  - o Error if record uses MMY rather than BaseVehicle: BaseVehicle (MMY) is missing or invalid.
  - o Vehicle Options: All vehicle options (configurations) specified in an application record must be valid for the specified base vehicle.

- o Error if the options specified exist, but not for the specified vehicle: MMY + Options do not match a known vehicle configuration.
- o Error if the options specified do not exist for any vehicle/
- o Part Number: The part number must exist in AAP.
- o Error if part ID not found: Part Number is missing or invalid.
- o Error if part name not found: Part name not found.
- o Error if multiple parts found with the same name.
- Brand Code: The part number must be valid for the brand / subbrand specified in the header <BrandAAIAID> tag of the input file.
- Part Type: A valid part type must be supplied.
- Part Number/Part Type: The part must be valid for the <PartType> specified in the input file in the AAP PIM system.
- Position: The position specified must be valid for the part type.
- Duplicate Notes: An application record may not contain more than one of the same Notes.
- Quantity: The quantity must not be zero.

Data Quality

Data quality validations are performed to aid in preventing "bad data" from being committed to the database.

- Overpopulation: An application record may not contain more than 4 vehicle options and may not contain a value for an option with only one available configuration.
- Confusing Countermen 1: An application record must not be identical to an existing application record (within the same product line/part type combination) with only the part number being different.

AAP Catalog Reporting

A series of reports are run on every application file we receive. The reports are sent to the vendors when there are issues with the following:

- Part Number Holes
- Dropped Application Coverage
- Application Overlaps
- Application Holes
- Validation Errors

Digital Assets

ACES was initially designed to deliver vehicle-based application data to locate replacement parts. As of Version 3, ACES now supports looking up any type of content, not just part numbers. This content could include application-specific digital assets such as diagrams (exhaust, belts, suspension, etc), technical bulletins, installation instructions; vehicle images, etc. (Note that part-specific digital asset links are defined using PIES).

Only a reference to the asset is defined in this specification. No information related to the actual asset such as size, image type, dimensions, or hotspots are delivered in the ACES file.

The "AssetName" tag must include the vendor number, name of the image, and the file extension. i.e. <AssetName>8134_1234.jpg</AssetName>

Submit these images via our FTP site and place them in your inbound folder.

Help and Assistance

If your team has any questions, concerns, or just need assistance with ACES files, please email us at catalogcontent@advance-auto.com.