

Preparing for Automotive and Heavy Duty Aftermarket PIES & ACES files

A Primer by Pricedex Software Inc.

Jeffrey P Marshall, ACP

STRICTLY CONFIDENTIAL

2022



Your Account Contact:

John Shane
Senior Account Executive
E: john.shane@pricedex.com
Tel: +1 613.341.9200, ext. 124

P.O. Box 458, 1864 Highway 2, East, Brockville, ON K6V 5V6 CANADA

ABOUT THIS DOCUMENT

This document provides the reader with a general guideline on what product information is required to support the North American Automotive Aftermarket with Product Files and Application Data, known to the industry as ACES and PIES files.

Companies utilizing the data and code sets incorporating information from the Product Information Exchange Standard (PIES), the Product Classification Database (PCdb) and the Autocare Brand Table, may do so freely, by permission of the Auto Care Association.

Companies using data from either of the Product Classification Database (PAdb) or the Vehicle Configuration Database (VCdb) do so under subscription license from the Auto Care Association.

Pricedex Software® is an expert aftermarket software solutions and services provider, working globally in the automotive, industrial and commercial vehicle aftermarkets, with Original Equipment Manufacturers and independent aftermarket manufacturers alike.

Aside from its state-of-the-art Product Information Management (PIM) software solution, AutoPIM Pro™, Pricedex® provides a wide range of Partner Services™ to the aftermarket community, at reasonable rates. These services include:

PIES Mapping Services

ACES Mapping Services

VMRS Product Classification Services

Data Cleansing Services

Training & Education on Aftermarket PIES and ACES industry standards.

COPYRIGHT NOTICE: This document, and all its contents and references, are ©Copyright 1999-2022, Pricedex Software Inc. This document is provided to the end-user on a strictly confidential, basis. Users may not copy or distribute any portions of this document, in whole or in part, without the express written consent of Pricedex. All media rights reserved, Pricedex Software Inc.

Table of Contents

ABOUT THIS DOCUMENT 1

Example Product Classifications – Automotive Ignition Coil Components 3

Example Product Classifications – Heavy Duty Front Brake Components..... 8

Vendor Identifications – Automotive and Heavy Duty Aftermarket 10


Part Interpretation – Vehicle Applications (Automotive) 11

Part Interpretation – Heavy Duty..... 12

PIES Files – What a Reseller Wants 12


Example Product Classifications – Automotive Ignition Coil Components


Product Classifications in the Aftermarket define a) what the Part is (and where it should appear in a catalog), and b) What are the recommended set of attributes used to describe the product. Product Classifications, or “Part Terminologies”, are drawn from the Auto Care Association Product Classification Database (PCdb). Heavy Duty components are coded from the Vehicle Maintenance Reporting System (VMRS). Relevant examples appear below.

Aftermarket Classification Number	Description	Fitment Position Options	Recommended Product Attributes (Specifications) – if applicable		Representative Image
13416	Direct Ignition Coil Boot	N/A Left Right Front Rear	Length	Describes Measurement	
			Boot Color	Describes Color	
			Terminal Quantity	Describe Quantity	
			Terminal Gender	Describe Gender	
			Mounting Bracket Included	Describes If Mounting Bracket Is Included	
			Mounting Bracket Hole Quantity	Describes Quantity	
			Grade Type	Describes Type Of Grade	
			Boot Material	Describes Material	
			Resistance	Describes Measurement	
			Ignition Type	Describes Type	
			Terminal Type	Describes Type Of Terminal	


Aftermarket Classification Number	Description	Fitment Position Options	Recommended Product Attributes (Specifications) – if applicable		Representative Image
7060	Ignition Coil	N/A Left Right Front Rear Center	Coil Shape	Describes Shape	
			Coil Type	Describes Type	
			Coil Wire Included	Describes If Coil Wire Is Included	
			Connector Gender	Describe Gender	
			Maximum Diameter	Describes Measurement	
			Height	Describes Measurement	
			Voltage	Describes Voltage Measurement	
			Mount Type	Describes How Mounted	
			Mounting Bracket Included	Describes If Mounting Bracket Is Included	
			Mounting Position	Describes How Mounted	
			Wire Quantity	Describes Quantity	
			Oil Filled	Describes If Oil Filled	


			Overall Height		
			Requires External Resistor	Describes If Requires An External Resistor	
			Terminal Gender	Describe Gender	
			Terminal Quantity	Describe Quantity	
			Length	Describes Measurement	
			Width	Describes Measurement	
			Ignition Type	Describes Type	
			Terminal Type	Describes Type Of Terminal	
			Mounting Hole Quantity	Describes Quantity	
			Mounting Hardware Included	Describes If Any Installation Hardware Is Included	
			Secondary Resistance	Describes Resistance Measurement	
			Primary Resistance	Describes Resistance Measurement	

Aftermarket Classification Number	Description	Fitment Position Options	Recommended Product Attributes (Specifications) – if applicable		Representative Image
10150	Ignition Coil Boot	N/A	Material	Describes Material	(Older coil boots) 
			Color	Describes Color	
			Attachment Type	Describes Type	
			Minimum Diameter	Describes Measurement	
			Maximum Diameter	Describes Measurement	
			Length	Describes Measurement	
			Thickness	Describes Measurement	

Aftermarket Classification Number	Description	Fitment Position Options	Recommended Product Attributes (Specifications) – if applicable		Representative Image
2596	Pigtail Connector – Ignition Coil	N/A	Gender	Describes Gender	
			Shape	Describe Shape	
			Quantity	Describes Quantity	
			Wiring Harness Length	Describes Measurement	
			Wire Quantity	Describes Quantity	
			Terminal Gender	Describe Gender	
			Terminal Quantity	Describe Quantity	
			Wire Gauge Measurement	Describes Gauge Measurement Of Wire Or Cable	
			Terminal Type	Describes Type Of Terminal	

Example Product Classifications – Heavy Duty Front Brake Components

Aftermarket Classification Number (VMRS)	Description	Recommended Product Attributes (Specifications) – if applicable	Representative Image
013-001-001	Backing Plate – Front Brake	<p>Configuration</p> <p>Hex Size</p> <p>Inside Diameter</p> <p>Material</p> <p>Maximum Diameter</p> <p>Maximum Outside Diameter</p> <p>Mount Hole Diameter</p> <p>Mount Hole Quantity</p> <p>Mounting Hardware Included</p> <p>New Or Remanufactured</p> <p>Package Contents</p> <p>Pipe Thread Diameter</p> <p>Rust Resistant</p> <p>Shoe Anchor Stud Attached</p> <p>Thickness</p> <p>Wheel Cylinder Mount Hole Diameter</p> <p>Wheel Cylinder Mount Hole Quantity</p>	

Aftermarket Classification Number (VMRS)	Description	Recommended Product Attributes (Specifications) – if applicable	Representative Image
013-001-013	Shoe & Lining Assembly - Front Brake	<ul style="list-style-type: none"> Adjusting Type Anchor Brake Type Coating Material Drum Size FMSI Number Friction Code Friction Material Friction Type GAWR Gross Axle Weight Rating Hardware Included Includes Hardware Kit New or Relined Number of Rivets Number of Shoes Shoe Material Shoe Type/ I.D. Shoe Width Size Web Web Type Width 	

Vendor Identifications – Automotive and Heavy Duty Aftermarket

A Manufacturer, and its Brand, have unique codes assigned in the Aftermarket to identify specifically, who the Parent Company is, which division of the Parent 'owns' the brand, and what is the Brand Code for the product in question. These are used for numerous identification and linking capabilities.

For example, if you are using 'Logos' in your content, or repeatable 'Features and Benefit Bullets' or 'Marketing Statements' for your company, brand, or product type, these code sets help identify, in a PIES file, what content should be applied 'globally' to products, without repeating the data for each particular part number.

In the case of an Automotive Aftermarket Company, the following code styles are used:

Parent Company: CQXQ

Brand Division: CWMD

Brand: DFCH

In the case of a Heavy Duty Aftermarket Company, the codes are drawn from Table 34 of the VMRS to denote:

Make: DTNAX

Brand: FELPRO

Company: TNNCO

Part Interpretation – Vehicle Applications (Automotive)

Typically, in an ACES file, the basic fitment data included would be:

1. Part Classification (to identify the Component)
2. Year (Year Range)/ Make/ Model/ (Sub-Model, if Necessary)/Engine (# Cylinders, Displacement)/ and other attributes of the vehicle as necessary to limit the specific application, and Region (i.e. US, Mexico, Canada, others – meaning the vehicle is SOLD in that particular country. If there are no differentiations between countries, a country does not have to be declared. However, declaring a country ‘forces’ the creation of additional vehicle records for other countries.)

An example of a ‘limiter’ or ‘Constraint’, as it is called in the industry, for your product categories would likely be attributes of the Engine

Possible Engine Attributes include the following:

Engine Manufacturer:

of Cylinders:

Displacement (liters)

Displacement (cc)

Displacement (cubic inches)

Block Type

Engine VIN Code

Engine Version

Valves per Engine

Aspiration

Fuel Type

Fuel Delivery Method may be another ‘limiter’:

Fuel Delivery Type:

Fuel Delivery Sub-Type:

Fuel System Control Type:

Fuel System Design:

3. Part Number

SPECIAL NOTE: In North America, vehicles are expressed by Year Make Model Engine for lookup. If the particular vehicles you are cataloging have a Serial Number Range, the Serial Number Ranges must be declared as a ‘Qualifier’ to the vehicle.

Part Interpretation – Heavy Duty

Unlike Automotive, the Heavy Duty aftermarket relies not on the ‘callout’ of a vehicle or piece of rolling stock, but rather, the Part Specifications, the Part Cross References, and an image or a line drawing. While Year Make Model call outs are ideal for trim and body parts, system specifications are much more critical to the identification of parts in the HD Aftermarket. This makes the Product Information File critical, to ensure that the provider of data has defined enough ‘form-fit-function’ attributes, Cross References, and images and/or line drawings.

PIES Files – What a Reseller Wants

The following are a list of ‘Attributes’ to the Product the automotive resellers generally require as their ‘minimum’ requirements. ‘Minimum Requirements’ generally mean the data is Mandatory if it is going to be included in a Point of Sale and/or Catalog system. We have also included a ‘Recommended List’ of additional attributes which Vendors ‘like to have’. In the world of Heavy Duty, the OE and/or Distributor has three file types into which the following set of data will be generated – for Product, Pricing, and Digital Assets, respectively. In the Automotive Aftermarket, there is one file type – PIES XML – in which the entire data set can be delivered.

PIES Section	Attribute Name	Purpose	Mandatory	Optional	Notes
Header	PIES Version	Identification of the version for machine consumption purposes	Yes		
	Blanket Effective Date	Date the file becomes ‘valid’ to publish	Yes		
	Language Code	(English) – EN	Yes		
	Technical Contact	Name of person responsible for creating file	Yes		
	Contact e-Mail	Email address for person responsible for creating file.	Yes		
Market Copy		Used to convey broad, reusable statements about the Company, the Brand, the Product Category, or the Product Classification. Up to 2000 Character text for EACH of the above	Yes		The form of this data is in ‘bulleted’ Features and Benefits’ statements about the Category, the Brand, or the Company. It is provided once in a PIES file and the data can be

					coded to apply to the 'Company', the 'Brand', or the Part Terminology so that the content properly appears in the distributor's electronic catalog in the right places. If assigned to a part terminology, the Features and Benefits bullets will be published to each part that is part of that category.
Item	Hazardous Material Code	A flag to indicate whether the product contains Hazardous Material	Yes		
	Item Level GTIN	Barcode in EAN format	Yes		
	Part Number	If multiple part numbers used for transactions, i.e. Marketing Part Number and Part Number, both to be sent in this field	Yes		
	Brand AAIA ID/VMRS ID	Four (Five) Letter Code – see above in document (DFCH)	Yes		
	Brand AAIA Label/VMRS ID	Text String Label identifying Brand (Diamond)	Yes		
PIES Section	Attribute Name	Purpose	Mandatory	Optional	Notes
ITEM (cont'd)	ACES Applications	A flag to indicate this part number has vehicle applications associated with it in an ACES File	Yes		
	Selling Package Quantity		Yes		
	Selling Package Unit of Measure		Yes		
	Container Type	Describes, by code, the type of packaging (i.e. Box, Bag,	Yes		

		Card, Clamshell, etc.)			
	Quantity per Application	Maximum Quantity used in an application	Yes		
	Available Date	Date product is available to order	Yes		
	Minimum Order Quantity	Minimum of Eaches in an order	Yes		
	AAIA Product Category Code	Also known as MPC Code (Typically, 570202 for Ignition Coils)	Yes		
	Part Terminology ID	Part Classification Code (see above)	Yes		
	Description – DES	80 character description of product	Yes		
	Description –MKT	2000 character marketing description of product		Yes	
	Description – SHO	20 Character Short Description of product	Yes		
	Description – KEY	Keywords to help search for product	Yes		
	Description - SLA	Slang Description or ‘alias words’ for product	Yes		
	Description – ASM	2000 characters to provide a textual list of vehicles on which part fits		Yes	
	Description – LAB	Description of Product appearing on its Label		Yes	
PIES Section	Attribute Name	Purpose	Mandatory	Optional	Notes
Prices	Price – ZRMP	Retail “MAP” Price (all other pricing sent separately)	Yes		
	Price UOM	Typically “PE” meaning Per Each	Yes		
Extended Information	Country Code	Country of Origin Code (i.e. US, JP, CN)	Yes		
	Emission Code	1- Legal in US, 2- Not in CA, 3-Off Road	Yes		
	Import Code – HSB	Harmonized Tariff Code	Yes		

		(Schedule B)			
	Lifecycle Code – LIF	From PIES Table, identifies 0 Proposed 1 Released 2 Available to Order 3 Electronically Announced 4 Announced 5 Temporarily 6 Renumbered 7 Superseded 8 Discontinued 9 Obsolete A Available Only While Supplies Last	Yes		
	Popularity Code - NPC	National Pop Codes A Top 60% of Product Group Sales Value (Units x \$, Hits, etc.) B Next 20% of Product Group Sales Value C Next 15% of Product Group Sales Value D Last 5% of Product Group Sales Value N New Item 3 Months, 6 months W Non-Stocking Item	Yes		
PIES Section	Attribute Name	Purpose	Mandatory	Optional	Notes
Attributes	Feature and Benefit Bullet 1		Yes		If the market copy code above has covered the specific features and benefits of the product category and there are no specific (to the part) features and benefits, this can be omitted.
	Feature and Benefit		Yes		If the market copy code

	Bullet 2				above has covered the specific features and benefits of the product category and there are no specific (to the part) features and benefits, this can be omitted.
	Feature and Benefit Bullet 3		Yes		If the market copy code above has covered the specific features and benefits of the product category and there are no specific (to the part) features and benefits, this can be omitted.
	Feature and Benefit Bullet 4		Yes		If the market copy code above has covered the specific features and benefits of the product category and there are no specific (to the part) features and benefits, this can be omitted.
	Attributes as defined by Part Classification, above		Yes		See the beginning of the document for the recommended list of attributes to describe the product's form, fit, function and performance characteristics.
Package Details	Pack Level 1 (Item)		Yes		
	GTIN		Yes		
	Height		Yes		
	Length		Yes		
	Depth		Yes		
	Weight		Yes		

	Orderable Package	Yes or No	Yes		
	Quantity of Eaches	In package	Yes		
	Pack Level 2 (Box)			Yes	
	GTIN			Yes	
	Height		Yes		
	Length		Yes		
	Depth		Yes		
	Weight		Yes		
	Orderable Package	Yes or No	Yes		
	Quantity of Eaches	Quantity of Pack Level 1 packages in box	Yes		

PIES Section	Attribute Name	Purpose	Mandatory	Optional	Notes
Package Details (cont'd)	Pack Level 3 (Case)			Yes	
	GTIN			Yes	
	Height		Yes		
	Length		Yes		
	Depth		Yes		
	Weight		Yes		
	Orderable Package	Yes or No	Yes		
	Quantity of Eaches	Quantity of Pack Level 2 packages in case	Yes		
	Pack Level 4 (Pallet)			Yes	
	GTIN			Yes	
	Height			Yes	
	Length			Yes	
	Depth			Yes	
	Weight			Yes	
	Orderable Package	Yes or No		Yes	
	Quantity of Eaches	Quantity of Pack Level 3 packages in pallet		Yes	
	Stacking Factor	How Many Levels of Cases on a Pallet		Yes	
NOTE		IF ANY PRODUCTS CONTAIN HAZARDOUS MATERIALS, THEN AN ADDITIONAL HAZARDOUS MATERIALS SECTION MUST BE COMPLETED	Mandatory if products contain hazardous materials		

PIES Section	Attribute Name	Purpose	Mandatory	Optional	Notes
Interchanges	Type Code	O – This is the OE Part S – This is a substitute Part U – User defined code		Yes	A minimum of two cross references, one being the OEM Part, is recommended
	Brand AAIA ID/VMRS Table 34 ID			Yes	
	Brand AAIA Label/VMRS Table 34 Label			Yes	
	Part Number			Yes	
	Quality Grade Level	P- Premium O- OEM S- Standard		Yes	
	Interchange Notes			Yes	
NOTE		Typically, the receiver of data relies on the manufacturer to identify interchanges. A preferred minimum is 2 interchange records – the OE part and a minimum of 1 competitor		Yes	

PIES Section	Attribute Name	Purpose	Mandatory	Optional	Notes
Digital Assets	File Name	Name of file			
	Asset Type	P04 – Primary Photo P01 – Photo out of package P02 – Photo in Package P03 – Photo Lifestyle View INS – Instruction Manual DRW – Line Drawing HMS – Hazmat Sheet BRO – Brochure DAS – Data Sheet	P04- Primary photo is generally mandatory minimum	Yes	
	File Type	JPG, GIF, BMP, PDF, etc.	Yes	Yes	
	Representation	(A) Actual (R) Representative	Yes	Yes	
	Resolution	Resolution in Pixels	Yes	Yes	
	Color Mode	RGB, CMYK	Yes	Yes	
	Orientation View	Top, Front, Left, Bottom, Right	Yes	Yes	
	Background	WHITE	Yes	Yes	
	Asset Height		Yes	Yes	
	Asset Width		Yes	Yes	
	UOM for Measurement	Usually in Inches or Pixels (IN or PX)	Yes	Yes	
NOTE		Typical Digital Asset Package includes a Primary Image, or multiple views of product. Instructions and Data Sheets are also useful digital assets. Digital assets can also include video or audio files.			
NOTE – When engaged with Pricedex in preparing and mapping PIES files, Pricedex will ensure that all Industry coding, VMRS/AAIA Brand Coding, proper Unit of Measure, Country Codes, etc., are populated. Additional services we can provide would be ‘repurposing’ image files to meet a particular trading partner’s naming conventions, file sizes etc. Additional services such as Watermarking images, etc., can be performed. Additionally, we have Excel-template worksheets with which you can more easily gather your data. These will be provided upon request at the commencement of the project.					