



XML VIN Decoder Service

**Solution Overview, Data Dictionary and Schema
& Developers Reference Guide**

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VIN Decoder Solution Overview

About this guide

This manual is organized into three sections:

- I. VIN Decoder Solution Overview
- II. Data Dictionary
- III. Developers REST/XML Guide

Section one describes the highlights and details of the service in general. Section two simply shows the available data. Section three is a comprehensive guide for the developer to aid in implementation with either the 15 day free trial, or the full production system.

Overview

The XML Decoder solution is a dynamic real time service which allows your existing application to send a VIN number to the service, and receive back up to hundreds of data points referenced to the VIN.

The system is optimized for less than 1/20th of a second response time which means that you can use this in your real time product.

The DataOne Software data collection includes vehicle data, and stock photos going back to 1981. The collection also includes over 1000 pieces of data which can be referenced to the VIN. Some data is market segment restricted, but for the vehicle sales industry there are almost 300 data points available.

Solution Components

High quality VIN decoding is made up of two very important components: High Quality Data, and the VIN Decoding Engine.

The Data Collection

DataOne Software utilizes Edmunds comprehensive data along with many other industry sources in order to provide this service. Extensive studies have been performed by DataOne in order to find the best collections of data possible for use in the DataOne Enterprise solution which provides inventory management to dealerships.

If there is a better source for US Market data, we will be first in line to add this data to our collection as this is critical for our other application services as well.

The data collection includes vehicle data going back to 1981. The collection also includes over 1000 pieces of data which can be referenced to the VIN.

The VIN Decoding Engine

There are many problems with VIN data in general which have their roots in the direct feed from the manufacturer. One of the largest problems is the missing trim issue. A 17 digit VIN can only truly be decoded to Year / Make / Model / Trim / Manufacturer Location. Every thing else is "reference" data. When the trim is missing from the decode, vehicle features and available options cannot be referenced.

For example: A 1999 Honda Accord with dx/lx/ex trims has different feature sets, transmission, and engines available. The DataOne Software VIN decoding engine is able to recognize and transmit back to the user the available trims for selection, and re-submittal of the VIN for a successful decode with reference data.

Studies show that the trim can be missing up to 33% of the time under the best of circumstances. Without the manual trim selection, the decode simply stops with year / make / model.

Other benefits of the VIN Decoding engine can be found as optional features below.

Options

There are many options and features that can be added to this service.

VINFIX Technology

A proprietary technology developed by DataOne software which uses advanced algorithms, data comparison and functions to fix common VIN issues such as invalid, missing or transposed characters. This is done dynamically and is processed within the 1/20th of a second response time. DataOne guarantees 100% accuracy with all fixed VINs.

Custom Data Normalization

DataOne allows users to customize each data element returned - to any value of choice. For example if the data returned for Drive train is 4WD, data normalization allows this value to be customized to any value such as 4 Wheel Drive, Four WD, or a number or even an XML tag.

Stock Photos

Stock photos of vehicles are high quality standardized photos of a make and model. A link to the stock photo is included in the data response from decoding a VIN, and the link can be used by your application to capture the photo.

Https

HyperText Transport Protocol Secure – The protocol for access to secure web servers. Using HTTPS in the URLs rather than HTTP sends the messages to a secure port number rather than to the default of 80. The session takes place when it is handled by a secure protocol.

Data Packs

- NHTSA Information: includes recalls, Technical Service Bulletins
- Edmunds Pricing: Vehicle valuations
- Vehicle Dimensions
- Fleet Vehicles: Coming soon
- Commercial vehicles: Coming soon
- Motorcycles: Coming soon
- Auto Parts: Coming soon

Steps to implement the XML Decoder

1. Sign up for the free XML VIN Decoder trial to receive an account name and authorization code via email.
<http://dataonesoftware.com/new/trialSelect.php>
2. Utilize the information shown in section 3 (which includes a code sample) to integrate with our system.
3. Start sending VIN requests to our service

In most cases, implementation can take place in 30-60 minutes. DataOne can provide free email support only for this process.

For full support with 100% guarantee of successful REST/XML integration there is a one time \$250.00 fee.

Services

DataOne Software provides decoding to many market segments including Auction / Inventory Management / Repossession / Transportation / Insurance Brokers & appraisers, warranty sales, investigation and research, media promotions, magazines, newspapers and catalog publishing.

Services include monthly and yearly contracts, as well as one time projects / studies with reporting options available.

Data Dictionary

Available Data Points

The XML Decoder decodes valuable information from VINs (Vehicle Identification Numbers) and passes this information directly to your application or web service - seamlessly. The XML Decoder can decode the following information based on a single VIN.

General Details

Year, Make, Model, Style, MFR Style Code, Number of Doors, Body Type, Trim Line, Vehicle Type, Vehicle Sub Type, Drive Type Code, Production Plant, MPG, Auto City, MPG Auto Highway, MPG Manual City, MPG Manual Highway, Where Built

Specific Details

Weight, Curb Weight, Gross Vehicle Weight Max, Cylinder Quantity, Displacement, Engine Type Code, Fuel Capacity, Horsepower, Torque, Compression Ratio, Drive Type Code, Acceleration (0-60), Engine Block Configuration, Cylinder Quantity, Engine Displacement, UOM, Cam Type, Fuel Induction, Values Per Cylinder, Aspiration, Fuel Type, Transmission Type, Transmission Speed, Restraint System, GVWR, Engine Block Heater, Cam Type, Compression Ratio, Compressor, Cylinders, Fuel Type, Max HP, Engine Size, Torque LBS, Engine Type, Engine Valves, Engine Valve Timing

Installed Equipment

ANTILOCK_BRAKES
DEPOWERED_AIRBAGS
FOUR_WHEEL_ANTILOCK_BRK
HEAD_AIRBAG
INT_CHILD_SAFETY: SEAT
PASSENGER_AIRBAG
SIDE_AIRBAG
STABILITY_CONTROL
TRACTION_CONTROL
CONVENIENCE: ADJUSTABLE_PEDALS
CONVENIENCE: CARGO_NETS
CONVENIENCE: CENTER_CONSOLE
CONVENIENCE: CRUISE_CONTROL
CONVENIENCE: CUPHOLDERS
CONVENIENCE: DOOR_POCKETS
CONVENIENCE: EASY_ENTRY

CONVENIENCE: OVERHEAD_CONSOLE
CONVENIENCE: POWER_OUTLETS
CONVENIENCE: REMOTE_MIRRORS
CONVENIENCE: REMOTE_TRUNK_RELEASE
CONVENIENCE: RETAINED_ACCSSORY_PWR
CONVENIENCE: SEATBACK_STORAGE
CONVENIENCE: STEERING_ADJUSTMENT
CONVENIENCE: STEERING_POWER
CONVENIENCE: STEERING_WHEEL_CTRL
CONVENIENCE: UNIV_RMT_TRANSMIT
COMFORT: ACCESSORIES
COMFORT: AIR_CONDITIONING
COMFORT: AIR_FILTRATION
COMFORT: CARGO_TRUNK_LIGHTS
COMFORT: CENTER_CONSOLE_TRIM
COMFORT: DASH_TRIM
COMFORT: DOOR_TRIM
COMFORT: MATS
COMFORT: READING_LIGHTS
COMFORT: REARVIEW_MIRROR
COMFORT: SHIFT_KNOB
COMFORT: STEERING_WHEEL_TRIM
COMFORT: VANITY_MIRRORS
DRIVTRN: 4WD_TYPE
DRIVTRN: CENTER_DIFFERENTIAL
DRIVTRN: DESCENT_CONTROL
DRIVTRN: DIFFERENTIAL_LIMSLIP
DRIVTRN: DIFFERENTIAL_LOCKING
DRIVTRN: DRIVEN_WHEELS
DRIVTRN: LOCKING_HUBS
DRIVTRN: TRANSFER_CASE
DRIVTRN: TRANSMISSION
ENGINE: BLOCK_HEATER
ENGINE: CAM_TYPE
ENGINE: COMPRESSION_RATIO
ENGINE: COMPRESSOR
ENGINE: CYLINDERS
ENGINE: FUEL_TYPE
ENGINE: MAX_HP
ENGINE: SIZE
ENGINE: TORQUE_FT_LBS
ENGINE: TYPE
ENGINE: VALUES
ENGINE: VALVE_TIMING

ENTERTAINMENT: ANTENNA_TYPE
ENTERTAINMENT: AUDIO_SYSTEM
ENTERTAINMENT: MULTI_CD_LOCATION
ENTERTAINMENT: PREMIUM_BRAND
ENTERTAINMENT: PREMIUM_SPEAKERS
ENTERTAINMENT: REAR_AUDIO
ENTERTAINMENT: REAR_HEADSETS
ENTERTAINMENT: SPEAKERS
ENTERTAINMENT: TV
ENTERTAINMENT: VIDEO
ENTERTAINMENT: VIDEO_GAMES
ENTERTAINMENT: WATTS
EXT FEATURES: BRUSH_GUARD
EXT FEATURES: CHROME_GRILLE
EXT FEATURES: REAR_SPOILER
EXT FEATURES: SKID_PLATES
FRONT SEAT: DRVR_SEAT_HEATED
FRONT SEAT: DRVR_SEAT_HEIGHT
FRONT SEAT: DRVR_SEAT_LUMBAR
FRONT SEAT: DRVR_SEAT_POWER
FRONT SEAT: DRVR_SEAT_VENTILATED
FRONT SEAT: PASSNGR_SEAT_HEATED
FRONT SEAT: PASSNGR_SEAT_HEIGHT
FRONT SEAT: PASSNGR_SEAT_LUMBAR
FRONT SEAT: PASSNGR_SEAT_POWER
FRONT SEAT: PASSNGR_SEAT_VENTED
FRONT SEAT: SEATING_CAPACITY
FRONT SEAT: TYPE
FRONT SEAT: UPHOLSTERY
INSTRUMENT: CLOCK
INSTRUMENT: COMPASS
INSTRUMENT: EXTERNAL_TEMP
INSTRUMENT: HEAD_UP_DISPLAY
INSTRUMENT: LOW_FUEL_LEVEL
INSTRUMENT: TACHOMETER
INSTRUMENT: TRIP_COMPUTER
MEMORY SETTINGS: DRVR_SEAT
MEMORY SETTINGS: EXTERIOR_MIRRORS
MEMORY SETTINGS: NUMBER_OF_DRIVERS
MEMORY SETTINGS: PASSNGR_SEAT
MEMORY SETTINGS: REAR_VIEW_MIRROR
MEMORY SETTINGS: STEERING_WHEEL
POWER FEATURES: MIRRORS_AUTO_DIMMING
POWER FEATURES: MIRRORS_HEATED

POWER FEATURES: MIRRORS_POWER
POWER FEATURES: MIRRORS_POWER_RETRACT
POWER FEATURES: MIRRORS_REVERSE_TILT
POWER FEATURES: ONE_TOUCH
POWER FEATURES: POWER_DOOR_LOCKS
POWER FEATURES: POWER_WINDOWS
REAR SEAT: CENTER_ARMREST
REAR SEAT: CHILD_SEAT
REAR SEAT: FOLDING
REAR SEAT: HEATED
REAR SEAT: HEAT_DUCTS
REAR SEAT: JUMP_SEATS
REAR SEAT: LUMBAR
REAR SEAT: QUANTITY
REAR SEAT: THIRDFROW_SEAT_FOLDING
REAR SEAT: THIRDFROW_SEAT_TYPE
ROOF GLASS: CONVERTIBLE_ROOF
ROOF GLASS: CONVERTIBLE_WINDOW
ROOF GLASS: FRONT_WIPERS
ROOF GLASS: PRIVACY_GLASS
ROOF GLASS: REAR_DEFOGGER
ROOF GLASS: REAR_QTR_WINDOWS
ROOF GLASS: REAR_SUNROOF
ROOF GLASS: REAR_WINDOW_SUNSHADE
ROOF GLASS: REAR_WIPER
ROOF GLASS: REMOVABLE_ROOF
ROOF GLASS: ROOF_RACK
ROOF GLASS: SIDE_WINDOW_SUNSHADE
ROOF GLASS: SUNROOF
SAFETY: ABS
SAFETY: AIRBAGS_HEAD
SAFETY: AIRBAGS_SIDE
SAFETY: ANTI_THEFT_SYSTEM
SAFETY: BRAKES
SAFETY: BRAKES_ASSIST
SAFETY: CHILD_SAFETY: LOCKS
SAFETY: CHILD_SEAT_ANCHORS
SAFETY: CORNERING_LIGHTS
SAFETY: DAYTIME_RUNNING_LIGHT
SAFETY: ENGINE: IMMOBILIZER
SAFETY: FOG_LIGHTS
SAFETY: HEADLIGHTS
SAFETY: HEADLIGHTS_AUTO_DELAY
SAFETY: HEADLIGHTS_DUSKSENSOR

SAFETY: HEADLIGHT_CLEANERS
SAFETY: HEADRESTS_FRONT
SAFETY: HEADRESTS_REAR
SAFETY: HEADRESTS_THIRD_ROW
SAFETY: PARKING_ASSISTANCE
SAFETY: PASSNGR_AIRBAG
SAFETY: SEATBELTS_FRONT
SAFETY: SEATBELT_FRONT_CENTER
SAFETY: SEATBELT_REAR_CENTER
SAFETY: SIGNAL_MIRRORS
SAFETY: STABILITY_CONTROL
SAFETY: TRACTION_CONTROL
SAFETY: TRUNK_RELEASE
SUSPENSION: ACTIVE_SUSPENSION
SUSPENSION: INDEP_SUSPENSION
SUSPENSION: LEVELING_SUSPENSION
SUSPENSION: STABILIZER_BAR
SUSPENSION: LIFTGATE_WINDOW
SUSPENSION: REAR_DOOR_TYPE
SUSPENSION: SIDE_DOOR_TYPE
TELEMTCS: EMAIL
TELEMTCS: NAVIGATION_SYSTEM
TELEMTCS: PHONE
TELEMTCS: SATELLITE_COMMS
TOWHAUL: TIE_DOWNS
TOWHAUL: TRAILER_HITCH
TOWHAUL: TRAILER_WIRING
TRKFEATS: AUX_ENGINE: COOLER
TRKFEATS: AUX_GAS_TANK
TRKFEATS: AUX_TRANS_COOLER
TRKFEATS: BED_EXTENDER
TRKFEATS: BUMPERS
TRKFEATS: DOOR_REINFORCEMENT
TRKFEATS: ENGINE: HOUR_METER
TRKFEATS: LIGHT_BAR
TRKFEATS: RUNNING_BOARDS
TRKFEATS: TONNEAU_COVER
TRKFEATS: VINYL_FLOOR_COVERING
WHEELS: FRONT_RIMS_IF_DIFF
WHEELS: FRONT_TIRES_IF_DIFF
WHEELS: REAR_WHEELS
WHEELS: RIMS
WHEELS: RIM_SIZE
WHEELS: SPARE_RIM_TYPE

WHEELS: SPARE_TIRE_COVER
WHEELS: SPARE_TIRE_MOUNT
WHEELS: SPARE_TIRE_TYPE
WHEELS: TIRES
WHEELS: TIRE_TYPE
WHEELS: WHEEL_COVERS

Data Packs

National Highway Traffic Safety Data

This data pack consists of decades of data relative to vehicle complaints, recalls, technical service bulletins and defect investigations. The following data points are available:

Complaints to NHTSA

- If the vehicle had a crash
- Date of incident
- Vehicle involved in fire
- Number of persons injured
- Number of fatalities
- Vehicle mileage at failure
- Description of the complaint
- Component in question

Recalls

- Recalled component
- MFR campaign number
- Other manufacturers involved in the recall
- Begin date of manufacturing
- End date of manufacturing
- Vehicle, equipment or tire report
- Potential number of units affected
- Date owner notified by mfr
- Recall initiator (MFG/OVSC/ODI)
- Date report received by ODI
- Regulation part number
- Federal motor vehicle safety standard number

Technical Service Bulletins

- Service bulletin number

- Replacement service bulletin number
- Date of bulletin
- Code for failing component
- Description of summary

Defect Investigations

- Component description
- Date opened
- Date closed
- Recall campaign number
- Summary description

Edmunds Valuations

- Manufacturer Suggested Retail
- Price adjustment
- Retail
- Private party
- Trade in value
- Invoice
- Destination charge
- TMV
- Holdback type

Vehicle Dimensions

(Available for transportation market segments only)

- Height
- Width
- Length
- Ground Clearance
- Wheelbase

Developers REST/XML Guide

REST/XML Overview

The Web's underlying architectural style is called the Representational State Transfer (REST) model. REST is not new. It is a proven web technology. Web architecture and REST are a viable basis for web services architecture.

There is no cause for concern about the viability of integrating your application, service or web site with the XML VIN Decoder. Any HTTP client can talk to any HTTP server without any further configuration. The Web is a REST system! Many of the Web services that you have been using for many years including book-ordering services, search services, and online dictionary services - are REST-based Web services.

You may have been using REST, building REST services without even realizing it.

REST provides a freedom from standards such as SOAP and WSDL. You can utilize REST today, using W3C and IETF standards that range in age from 10 years (URIs) to 3 years (HTTP 1.1).

Why REST instead of SOAP?

Unlike SOAP, REST does not require a separate server side toolkit installation to send and receive data. Instead REST works with a technology that is already available: HTTP. HTTP empowers you to quickly and easily communicate your VIN decode needs through GET and POST requests.

Some studies also demonstrate that REST is about 6 times faster than SOAP.

Amazon has both SOAP and REST interfaces to their web services, and 85% of their usage is of the REST interface. Despite all of the hype over the SOAP stack, this is pretty compelling evidence that developers prefer the simpler REST approach. By using REST you can avoid writing your code against the increasingly complicated SOAP specification.

How Harness REST/XML Works

The DataOne REST/XML VIN Decoder is a service that quickly returns a complete set of decoded and referenced vehicle details to your software or service based on a VIN number (Vehicle Identification Number).

To access the Harness REST/XML web service you simply request a


```

    <td>vinNumbers: </td>
    <td><input name="vinNumbers" type="text" value="1FAFP54N4XA254572"></td>
</tr>
<tr>
    <td>bodyStyles: </td>
    <td><input name="bodyStyles" type="text" value="XXXXXX"></td>
</tr>
<tr>
    <td>accessCode: </td>
    <td><input name="accessCode" type="text"
value="rwerowioeeictpcorpwme34892tum34"></td>
</tr>
</table>
<input type="submit" name="Submit" value="Decode This VIN">
</form>

```

What do the variables represent?

clientName is your company name on file with DataOne Software

VINNumbers is each VIN number you would like to see decoded, separated by a comma.

bodyStyles is a value that must be supplied with a VIN (in some cases). The only way you will know to supply it is if a request without it returns a list of style ids. One of these must be chosen and resubmitted along with the VIN (more on this below). Note that the number of bodyStyles must match the number of VINNumbers even if blanks are provided (separated by commas).

Multiple Options

Some manufacturers assign the same VIN to multiple models, trim levels, body styles or transmission types.

Due to this industry wide VIN limitation there are occasions where VINS Harness requires one further data point in order to accurately decode a VINS to the point of deriving accurate vehicle details including installed equipment.

In such a case the following XML will be populated when returned. Note that there are two important elements:

DataOne_Multiple_Style and **DataOne_Multiple_Style_Name**. **DataOne_Multiple_Style_Name** contains the English language choices for what the VIN represents.

DataOne_Multiple_Style element contains the **styleID** that must be resubmitted for the choice made.

100002910 would represent first English language choice '**4dr Quad Cab Sport 4WD SB (4.7L 8cyl)**' and **100003787** would represent first English language choice '**4dr Quad Cab Sport Plus 4WD SB (4.7L 8cyl)**'. In this way you can present a choice to your end user and resubmit the request with the appropriate style. This style should be submitted within the parameter **bodyStyles**. When resubmitting a VIN Harness request all other variables should be resubmitted exactly as the first time.

Batch Submittal

Batch submittal allows software and services to submit a single request of up to 10,000 vehicle identification numbers. Using batch submittal is simple. Submit the **VINNumbers** parameter as a string with commas separating each VIN value.

Error Codes

Error codes can be enabled if you so choose. This will replace the english language error descriptions with two digit codes:

AT = Could not authenticate client for VINS Harness service

MM = The Harness is currently in maintenance mode. Please try again in a few minutes.

IV = This an invalid VIN. The checksum test failed. This VIN may be able to be decoded using vinFIX technology. Talk to DataOne to add this feature to your account.

VF = This an invalid VIN. The checksum test failed. Engaging vinFIX technology."

Returned XML

The following is an example of the XML that will be returned for all VIN decoding requests. *It is important to note that the XML tag name should be used to reference the data instead of counting positions since new data will occasionally be added to the response.* Be sure to watch the `decoded_error` element to check for any invalid VINS.

```
<?xml version="1.0" encoding="UTF-8" ?>
- <harness_REST_service>
  <version_info>4.2.1</version_info>
  <last_updated>07/30/2004</last_updated>
- <decoded_loop>
  <decoded_error />
  <decoded_vin_number>2B3HD56J2XH760488</decoded_vin_number>
  <vinSquish>2B3HD56JXH</vinSquish>
```

```

<DataOne_Multiple_Style />
<DataOne_Multiple_Style_Name />
<decoded_manufacturer_style_code>LHDP41</decoded_manufacturer_style_code>

<decoded_manufacturer_model_number>LHDP41</decoded_manufacturer_model_number>
<decoded_year>1999</decoded_year>
<decoded_make>Dodge</decoded_make>
<decoded_model>Intrepid</decoded_model>
<decoded_body>4 Dr ES Sedan</decoded_body>
<decoded_engine>3.2L 6-Cylinder</decoded_engine>
<decoded_numberOfDoors>4 Doors</decoded_numberOfDoors>
<decoded_where_built>BRAMALEA, ONTARIO, CANADA</decoded_where_built>
<decoded_gross_vehicle_weight_rating />
<decoded_engine_block_configuration>V</decoded_engine_block_configuration>
<decoded_engine_displacement>3.2</decoded_engine_displacement>
<decoded_cylinder_quantity>6</decoded_cylinder_quantity>
<decoded_fuel_induction>FI</decoded_fuel_induction>
<decoded_cam_type>SOHC</decoded_cam_type>
<decoded_valves_per_cylinder>4</decoded_valves_per_cylinder>

<decoded_engine_displacement_unit_of_measure>Li</decoded_engine_displacement_unit_of_measure>
<decoded_aspiration>NA</decoded_aspiration>
<decoded_fuel_type>G</decoded_fuel_type>
<decoded_bodyTypeSpelledOut>Sedan</decoded_bodyTypeSpelledOut>
<decoded_transmission>4-Speed Automatic</decoded_transmission>
<DataOne_Style_ID>13324</DataOne_Style_ID>
<DataOne_Model_ID>3495</DataOne_Model_ID>
<decoded_vehicle_type>Sedan</decoded_vehicle_type>
<decoded_curb_weight>3519</decoded_curb_weight>
<decoded_gross_vehicle_weight />
<decoded_weight />
<decoded_vehicle_height>55.9</decoded_vehicle_height>
<decoded_vehicle_width>74.7</decoded_vehicle_width>
<decoded_vehicle_length>203.7</decoded_vehicle_length>
<decoded_vehicle_ground_clearance>5.1</decoded_vehicle_ground_clearance>
<decoded_vehicle_wheelbase>113</decoded_vehicle_wheelbase>
<city_MPG_Array>19</city_MPG_Array>
<highway_MPG_Array>29</highway_MPG_Array>
<decoded_trim_level>ES</decoded_trim_level>
<decoded_installed_options>Cylinders,Horsepower,Torque,Drive Type
Code,Acceleration,Center Console,Cruise Control,Remote Trunk Release,Steering
Adjustment,Steering Power,Air Conditioning,Steering Wheel Trim,Transmission,Cam
Type,Size,Type,Valves,Audio System,Drvr Seat
Power,Type,Upholstery,Clock,Tachometer,Mirrors Heated,Power Door Locks,Power
Windows,Front Wipers,Rear Defogger,Abs,Fog Lights,</decoded_installed_options>
<decoded_installed_option_value>6,225@6300,225@3800,FWD,0-60 In 8.5 Seconds,Front
Console With Storage,,,Tilt -adjustable,Power Steering,,Leather-wrapped,4-speed
Automatic,Single Overhead Cam (SOHC),3.2L,Gas,24,AM/FM Cassette,8-way Power,Bucket
Front Seats,Velour,,,Heated Mirrors,,,Intermittent,,,,</decoded_installed_option_value>

<decoded_installed_option_category>Engine,Engine,Engine,Engine,Engine,Convenience,Conv
enience,Convenience,Convenience,Convenience,Comfort,Comfort,Drivetrain,Engine,Engine,En
gine,Engine,Entertainment,Front Seat,Front Seat,Front Seat,Instrument Panel,Instrument
Panel,Power,Power,Power,Roof/Glass,Roof/Glass,Safety,Safety,</decoded_installed_option_ca
tegory>
<decoded_optionals>Array</decoded_optionals>
<decoded_installed_option_custom_normalized />
<decoded_installed_option_value_custom_normalized />

```

<decoded_warranty_miles>36000,36000,36000,100000,</decoded_warranty_miles>
<decoded_warranty_type>Basic,Drivetrain,Roadside,Rust,</decoded_warranty_type>
<decoded_warranty_months>36,36,36,60,</decoded_warranty_months>
<decoded_warranty_comment>,,,,</decoded_warranty_comment>
<decoded_warranty_midyearchar>1,1,1,1,</decoded_warranty_midyearchar>

<decoded_warranty_years_limited_or_unavailable>L,L,L,L,</decoded_warranty_years_limited_or_unavailable>
<decoded_warranty_years_limit>3,3,3,5,</decoded_warranty_years_limit>

<decoded_warranty_miles_limited_or_unavailable>L,L,L,L,</decoded_warranty_miles_limited_or_unavailable>

<decoded_warranty_miles_limit>36000,36000,36000,100000,</decoded_warranty_miles_limit>

<decoded_real_manu_date />
<decoded_manufacturer_ext_colors>Dark Garnet Red Pearlcoat,Light Cypress Green Pearlcoat,Deep Amethyst Pearlcoat,Cinnamon Glaze Metallic Clearcoat,Steel Blue Pearlcoat,Bright Platinum Metallic Clearcoat,Candy Apple Red Metallic Clearcoat,Champagne Pearl Metallic Clearcoat,Deep Cranberry Pearlcoat,Deep Slate Pearlcoat,Forest Green Pearlcoat,Stone White Clearcoat,</decoded_manufacturer_ext_colors>
<decoded_basic_ext_colors>Dk. Red,Lt. Green,Purple,Red,Blue,Silver,Red,Off-white,Dk. Red,Dk. Gray,Dk. Green,White,</decoded_basic_ext_colors>

<decoded_manufacturer_ext_color_code>PRV,PG2,PCN,PLB,PBQ,PS4,PH2,PTE,PMT,PAW,PG8,PW1,</decoded_manufacturer_ext_color_code>

<decoded__ext_r_color_code>61,147,80,155,50,91,,154,19,9,52,255,</decoded__ext_r_color_code>

<decoded_ext_g_color_code>29,150,53,135,51,92,,154,10,9,120,255,</decoded_ext_g_color_code>

<decoded_ext_b_color_code>21,147,114,125,60,89,,147,9,10,102,255,</decoded_ext_b_color_code>
<decoded_manufacturer_int_colors>Agate,Tan/Camel,Medium Quartz,</decoded_manufacturer_int_colors>
<decoded_basic_int_colors>Gray,Tan,Silver,</decoded_basic_int_colors>

<decoded_manufacturer_int_color_code>AZ,K9,D5,</decoded_manufacturer_int_color_code>

<decoded_int_r_color_code>87,,,</decoded_int_r_color_code>
<decoded_int_g_color_code>90,,,</decoded_int_g_color_code>
<decoded_int_b_color_code>95,,,</decoded_int_b_color_code>
<decoded_msr_price>23340</decoded_msr_price>
<decoded_price_adjustment>430.18</decoded_price_adjustment>
<decoded_retail_price>9093</decoded_retail_price>
<decoded_private_party_price>7627</decoded_private_party_price>
<decoded_trade_in_value>5418</decoded_trade_in_value>
<decoded_invoice_price />
<decoded_destination_charge />
<decoded_tmv_price />
<decoded_holdback_type />
<DataOne_Path_To_Thumbnail>pictures/VEHICLE/1999/Dodge/13324/003187-T.jpg</DataOne_Path_To_Thumbnail>
<DataOne_Path_To_Enlarged>pictures/VEHICLE/1999/Dodge/13324/003187-E.jpg</DataOne_Path_To_Enlarged>
</decoded_loop>
</harness_REST_service>

Stock Photos

Stock Photos are an optional XML VIN decoder feature which gives users access to a stock photo during the VIN decoding process. To demo this feature of the XML VIN decoder service, please contact DataOne Software support and request that this feature is turned on for your account.

1. XML File Path method

Two file paths are added to the XML feed:

DataOne_Path_To_Thumbnail – A smaller resolution image that correlates to the make and model of the VIN that was decoded

DataOne_Path_To_Enlarged – A higher resolution image that correlates to the make and model of the VIN that was decode

To download images use the following logic to build a path to the file you wish to download:

<http://harnessftp.dataonesoftware.com/stockPhotos> + file path from XML

Please note that the file path within the XML changes very frequently. No portion of the file path from the XML feed should be hard coded into your application.

Note: Hot linking is not allowed. Clients are authorized to download each image no more than once for any given decode.

2. Within XML method (Coming in the near future)

Stock photos are encoded with base64, designed to make binary data survive transport layers that are not 8-bit clean. The actual stock photo arrives *within* the XML and can then be decoded. The string representation of the photos will appear within the following XML elements:

DataOne_Path_To_Thumbnail – A smaller resolution image that correlates to the make and model of the VIN that was decoded.

DataOne_Path_To_Enlarged – A higher resolution image that correlates to the make and model of the VIN that was decode

Support

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On the web

The following links provide valuable information to aid in implementing your REST client.

General:

<http://www.oreillynet.com/pub/wlg/3005>

<http://www.xml.com/pub/a/2000/02/09/feature>