

# Custom Parts Search Catalog

For an industry-leading manufacturer and supplier of brake system components

## Client

An industry-leading manufacturer and supplier of brake system components. They lead the global automotive aftermarket and have operations throughout all major continents.

- Location: Chicago, Illinois
- 5,100 employees
- \$550 million (USD) annual revenue

## Topology

- SQL Server (catalog repository)
- Java (web client)
- JavaScript, HTML 5, CSS3 (web UI)
- Magnolia CMS (Content Management)
- Apache Tomcat (Web server)

## Project Overview

The client manufactures and sells brake system components through B2B, B2E, and B2C channels. Over the years, they have developed and acquired various product brands that can be purchased online, but separated across disparate individual websites. Since there are multiple products and parts for each various vehicle make, model, and year, their objective was to build a catalog that would provide access to partners and customers through the corporate website.

ennVee was selected to lead the engagement by building the product and part database, and subsequently integrating it into their corporate website with proper security and access protocols. Additionally, a data upload tool needed to be built to enable periodic parts updates by the product and marketing teams.

## Solution

The catalog repository needed to be in place in order to be consumed by the web application. ennVee built the repository and the associated import tool to enable the raw input files to be imported into the database based on certain business rules. Raw data was previously received in either XML, text, or SQL Server database backup file formats.

We created the catalog repository in MS SQL Server database and built stored procedures for validating the imported data. The raw source data was subsequently loaded into the repository after applying business rules for assembling the fitment notes from various vehicle attributes:

- Sub-model
- Drive type
- Fuel type
- Transmission type
- Body style type
- Wheel base engine type

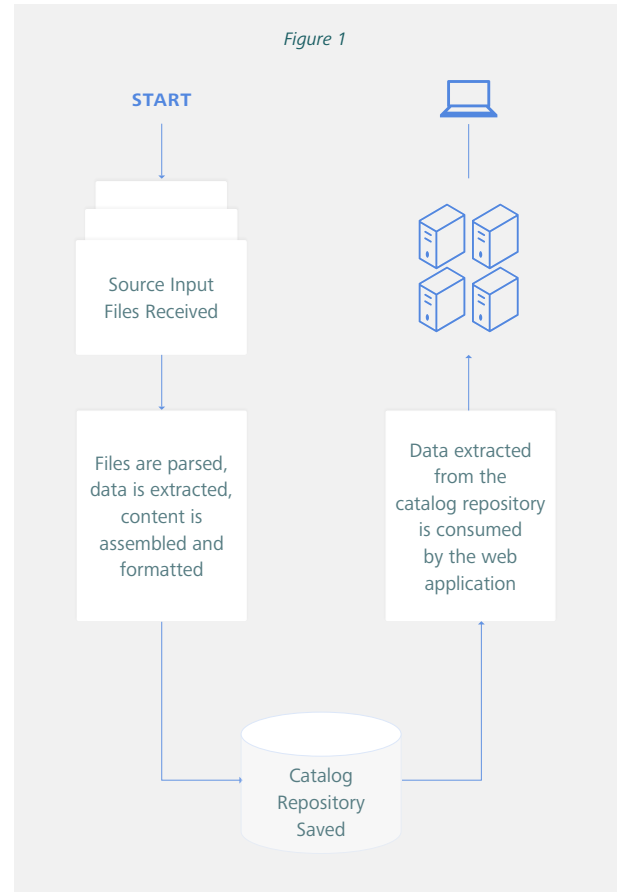
**Solution Process**

The raw input data is handled through a monitored process and is extracted to populate the respective entities in the catalog repository. Data import occurs for multiple types of parts known as "release groups", which include calipers, drums, rotors, hub assemblies, cylinders, etc. Each release group has a unique business rule for assembling the fitment notes, and is plugged into the database stored procedures, user defined functions, and software components. The solution process is illustrated in Figure 1.

**Business Benefits**

The catalog is being utilized by the client’s partners and customers for one family of products. We are currently training their IT team to administer the catalog and periodically import updated data.

- **Augmented configurability:** The library being used by the import tool is entirely configurable in terms of database, environment, and asset repository.
- **Organization:** The web application is written in such a way that the code is loosely coupled with that of the server side and is highly cohesive.
- **User experience:** Utilizing a lightweight web client enhances overall user experience with faster search results, and convenience by allowing users to save search criteria and results for future access.
- **Time savings:** Content is managed through Magnolia CMS, which provides a streamlined way for maintaining and rendering, and ensures high-quality formatting for all search results.



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