

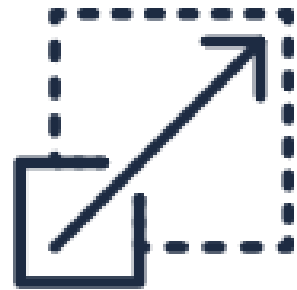
Methodology



**Select Important
Columns**



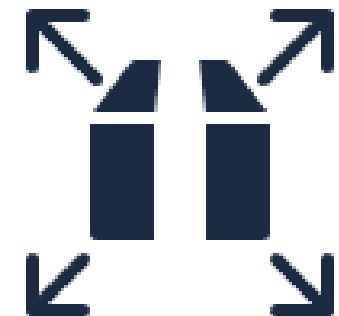
**Drop Null &
Anomalous Values**



Feature Engineering



**Exploratory Data
Analysis**



Mileage

The total distance that the vehicle has traveled since it was purchased.

Car Make

The name of a car’s manufacturer.

Car Model

Refers to the name of a car product and sometimes a range of products.

Car Year

Method of describing the version of vehicle.

Service Category

General categorization of services offered in the car repair shops.

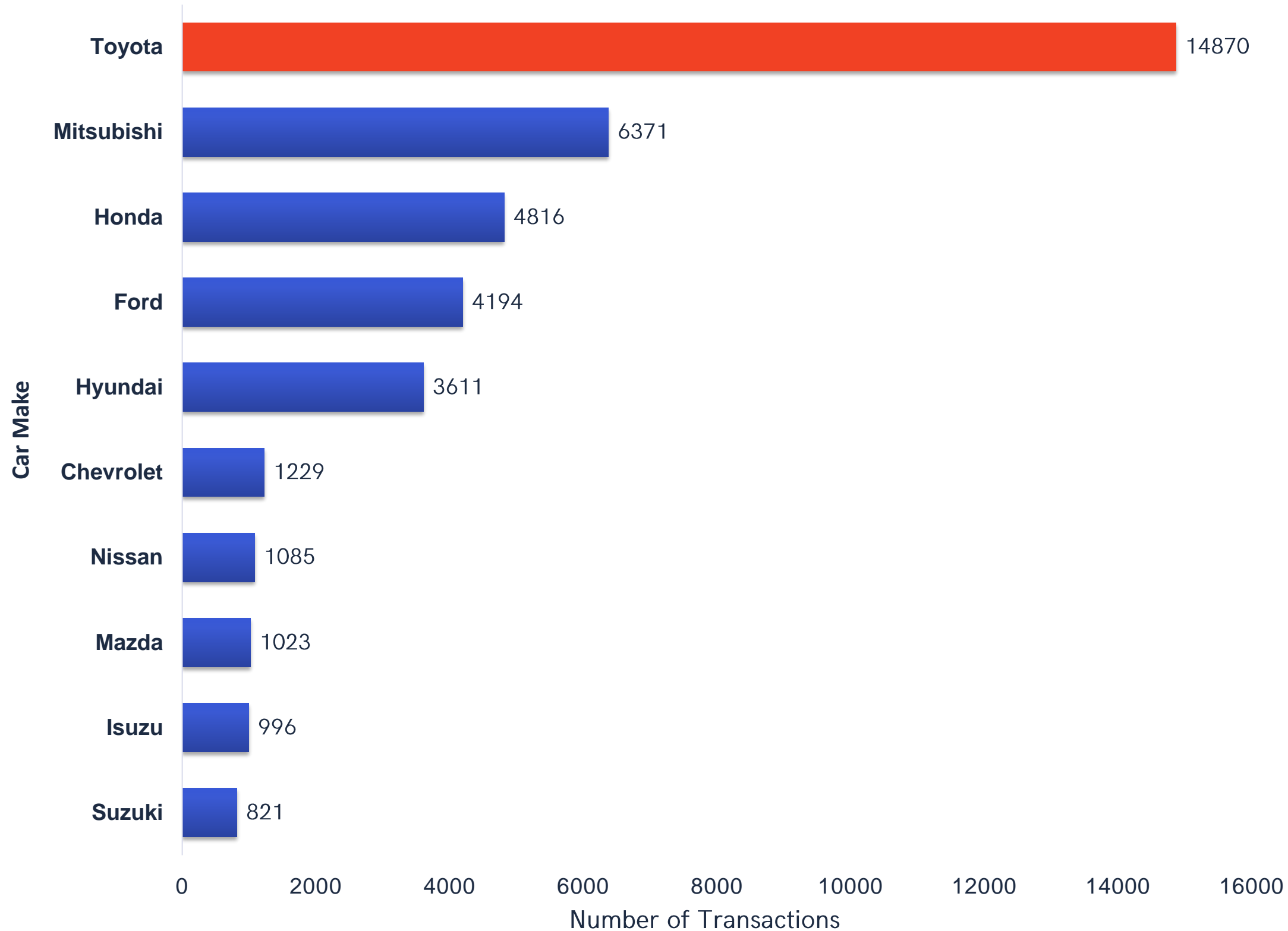
Service Package

Brief description of the completed service.

Important Features

Out of the 30 columns in the dataset, these are the most important variables that we think that will address the problem.

Top 10 Car Make with the Highest Number of Transactions

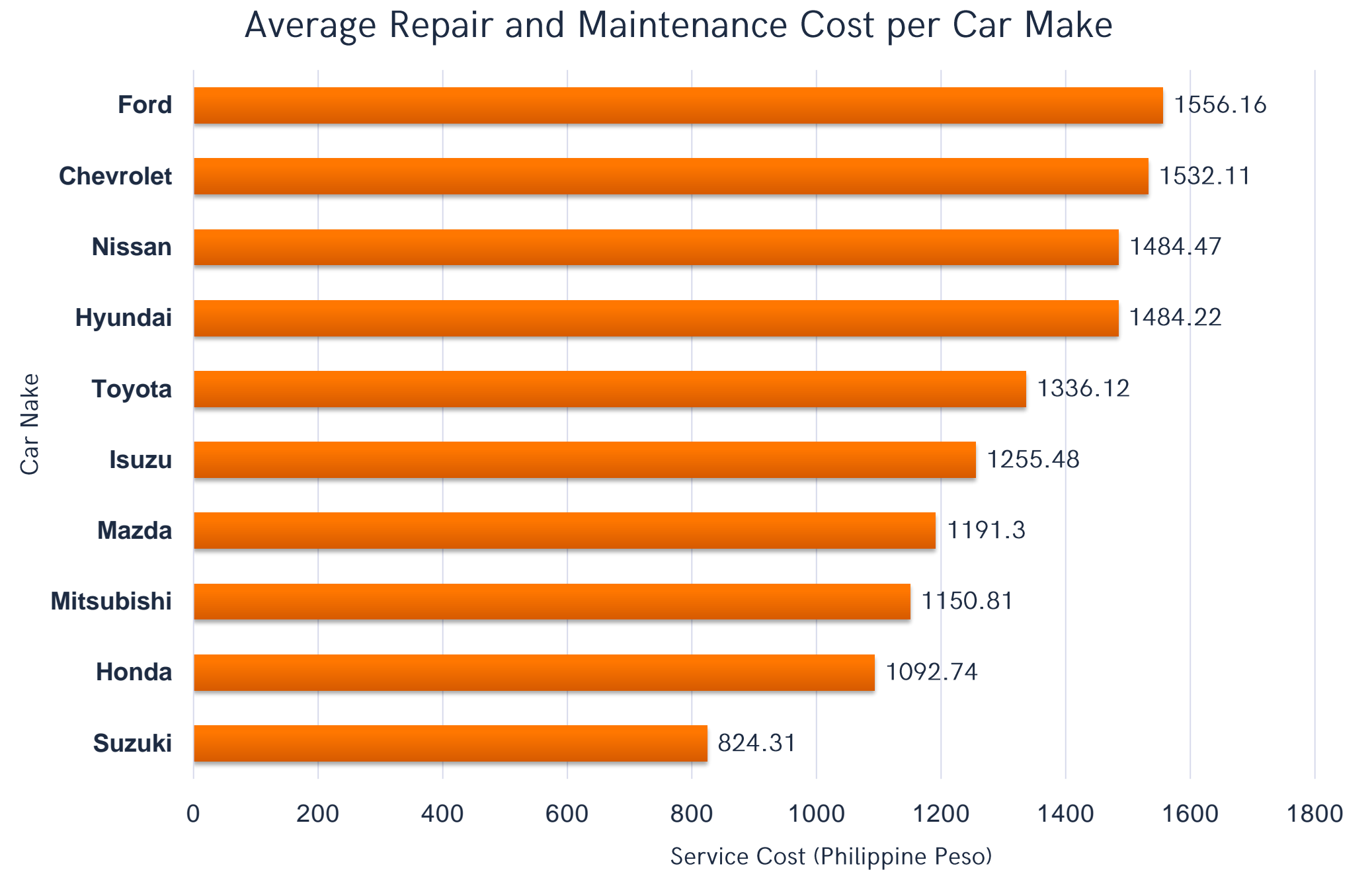


Toyota topped the list of car manufacturers with the most service transactions.

Reflective of Toyota's almost **39% market share** of total automotive sales in the Philippines and their **parts availability in the market.**

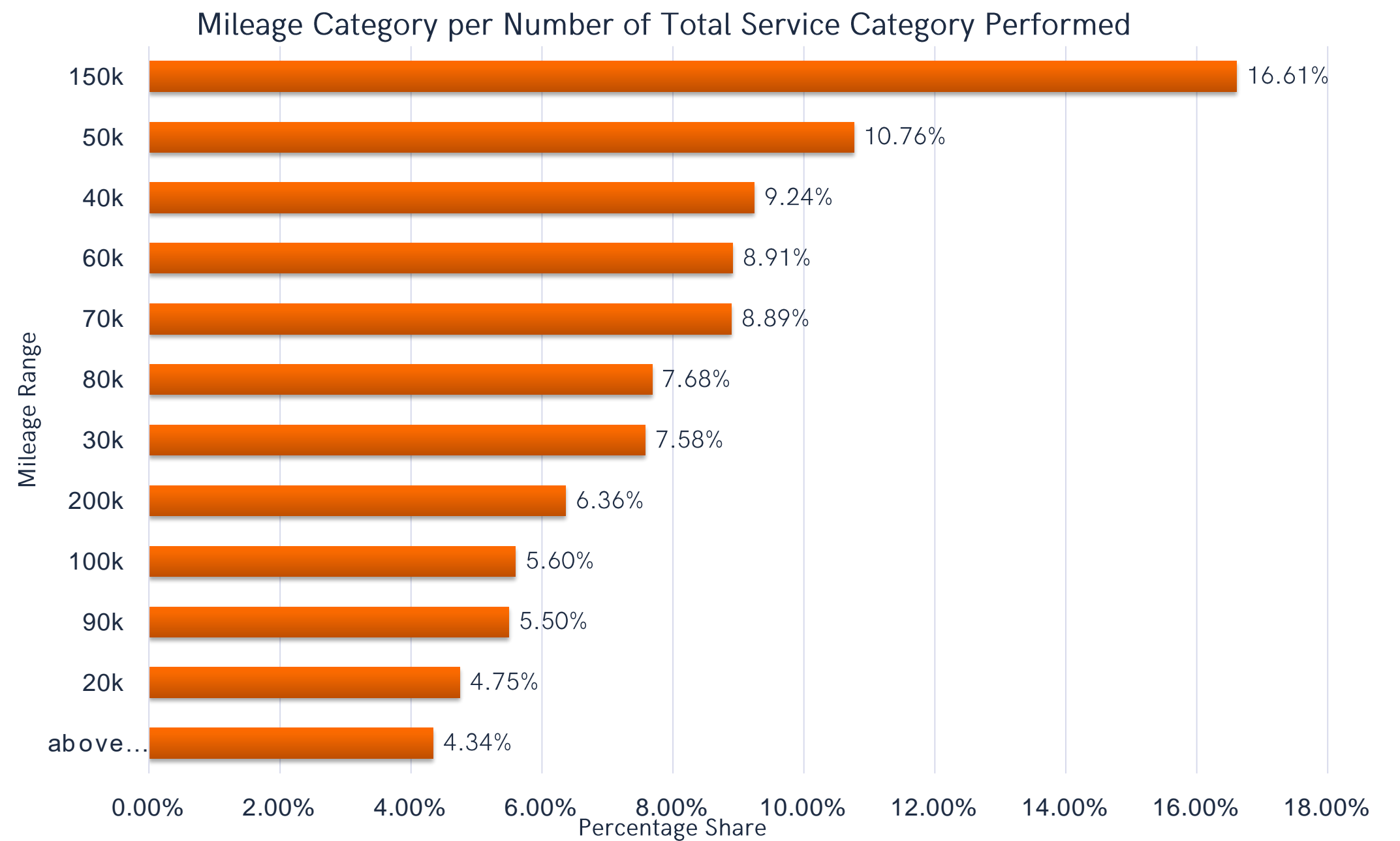
Source: Statista.com

The brands of Ford and Chevrolet topped the charts with the highest maintenance cost per make.

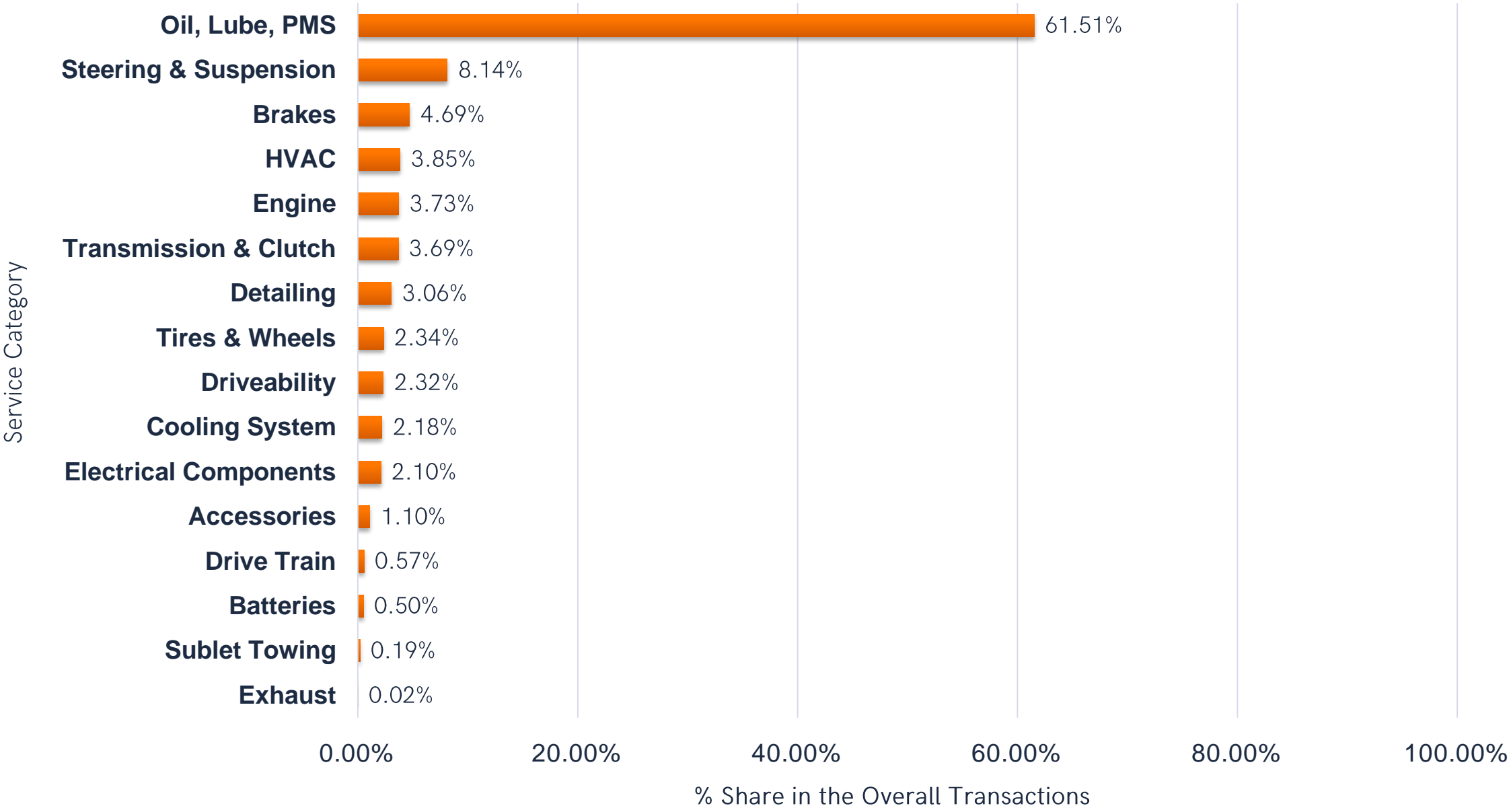


The average mileage for cars in the Philippines is 20,000 kilometers, according to a Carmudi research.

Around 1 out of every 5 cars being serviced is in the 100k to 150k mileage range. These vehicles are estimated to be at least 5 years old.



Most Popular Car Repair & Maintenance Services

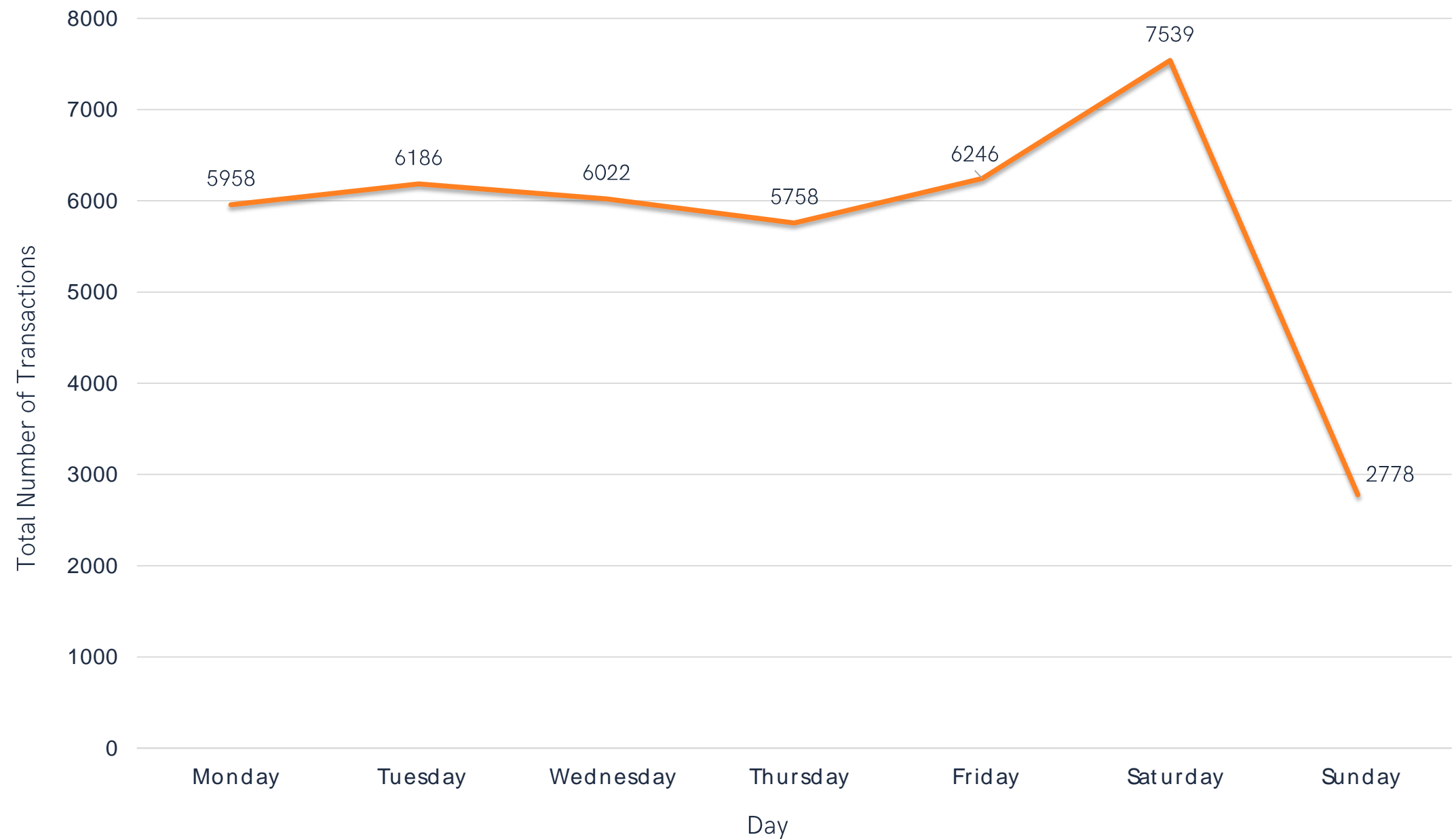


On average, 3 out of every 5 car owners go visit the car repair shops for an Oil, Lube, & Preventive Maintenance Service.

Car owners typically have their cars serviced beginning on Friday and peaking on Saturday.

In addition, fewer people have their cars serviced on Sunday.

Car Repair and Maintenance Weekly Pattern



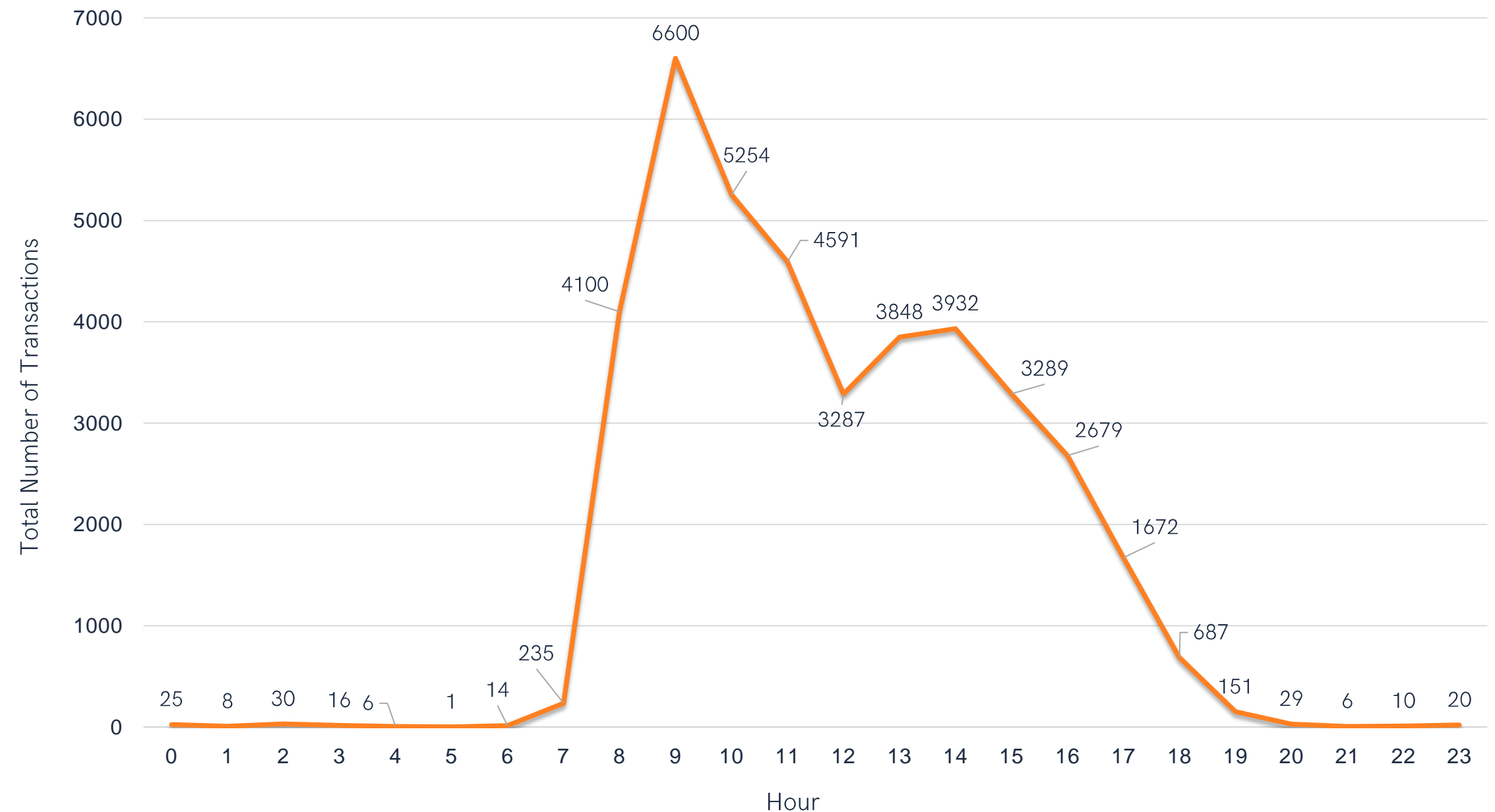
Note: Subject for review because the value stated is just the total count per day for a period of 4 years (2018 - 2021).

Car Repair and Maintenance Hourly Pattern

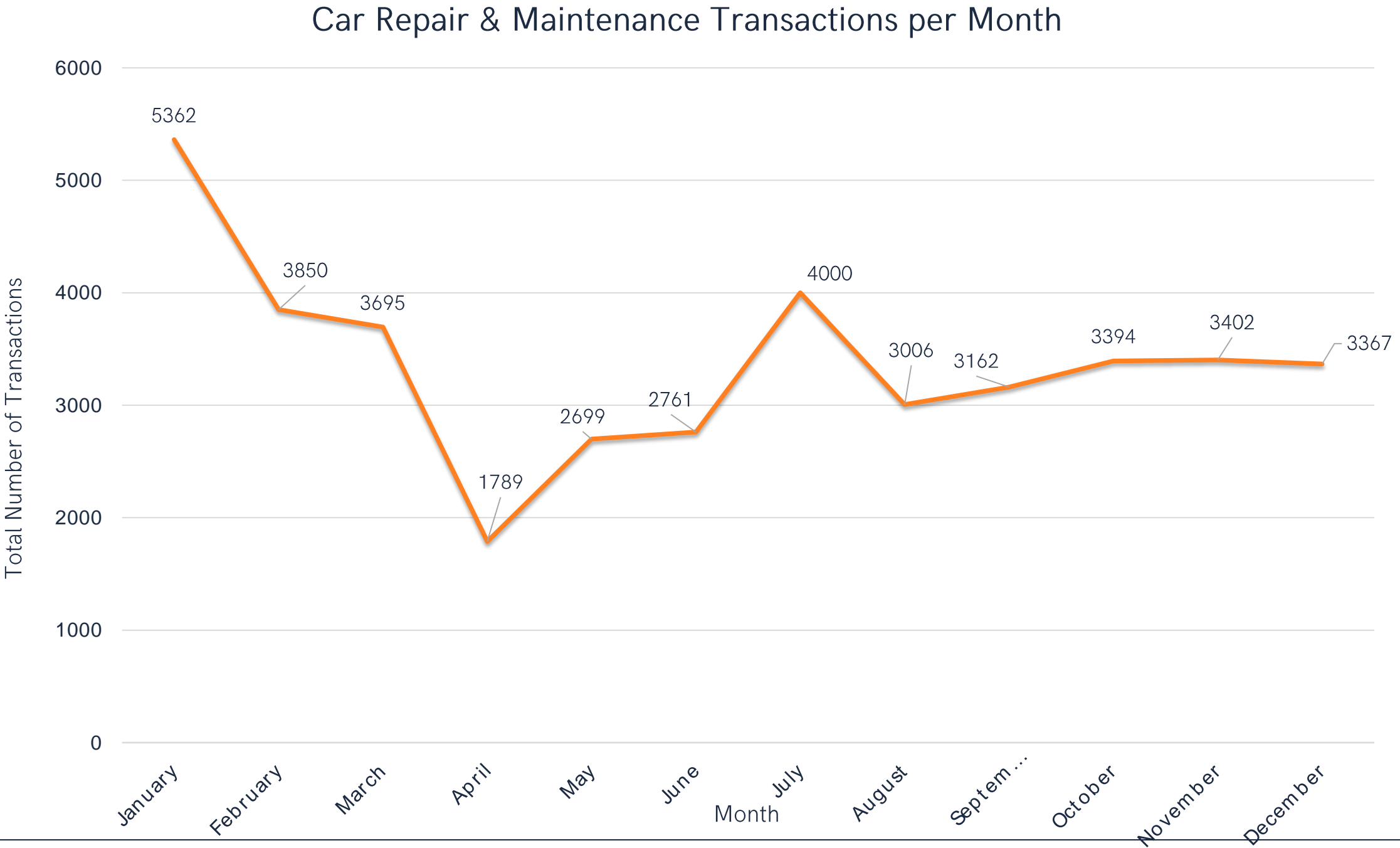
The majority of car owners preferred to have their vehicle serviced between the hours of 8 and 9 a.m.

After peak hours, the number of car owners visiting auto repair shops gradually decreases.

Note: Subject for review because the value stated is just the total count per hour for a period of 4 years (2018 - 2021).



The highest number of vehicles being serviced is around the month of January.



Note: Subject for review because the value stated is just the total count per month for a period of 4 years (2018 - 2021).

Work in progress: Conducting normality tests on the mileage distribution.

Current Roadblock: What are the important points when checking the normality of a distribution?

