SUBARU HISTORY BOOK

SINCE 1958

SUBARU

Confidence in Motion

SUBARU HISTORY BOOK

SINCE 1958

LEGACY of LEGACY.

The year 1989, 25 years ago, saw the birth of the new model, Legacy, the first Subaru car to target the world.
A car conceived from Subaru's commitment to innovation, Legacy embodied the concept of "a better quality of driving."

Evolution of Legacy

The name Legacy evokes the passing on of great traditions. It encompasses both the idea that Legacy carries forward Subaru's traditional technologies, such as the horizontally opposed engine and AWD, and the desire to pass on the joy of driving to as many drivers as possible.

1st gen Legacy
1989-1993

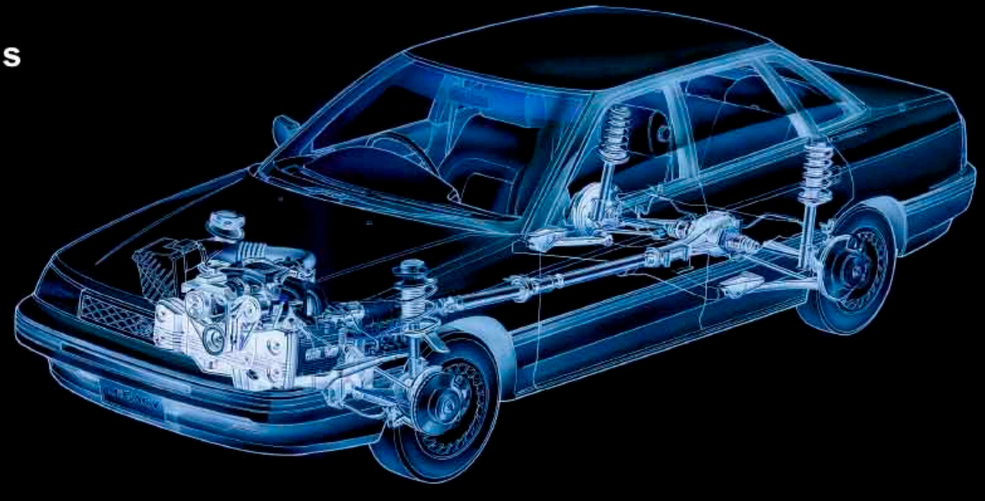
2nd gen Legacy
1993-1998

3rd gen Legacy
1998-2003

4th gen Legacy
2003-2009

5th gen Legacy
2009-

Development Secrets



From the development lead:
"The question we kept asking ourselves was 'why?' We repeatedly asked, why is this mechanism being used? By doing so, we were able to uncover the fundamental purpose of each mechanism. And we would ask ourselves again, is adopting this mechanism the correct thing to do?"

From the tuning lead:
"Just because we were pursuing stability, we didn't want the driving experience to feel cheap. We didn't want to make another car that left a poor impression. We wanted our cars to be prized for providing a rich and profound driving experience. This was the new Subaru identity."

Legacy's Debut Challenge

Leading up to the announcement of the first-generation Legacy, we decided to challenge the 100,000 km world speed record in Arizona, U.S.A. Over 19 days, driving both day and night, three 4WD sedans established a new world record, with an average speed of 223.345 km/h.

The Next Evolution

The all-new Legacy is a mid-size sports sedan which offers enhanced driveability and functionality while achieving a design required for a flagship model with a quality feel.

HISTORY TIMELINE

1917 —

Nakajima Aircraft

The roots of Subaru go back to the founding of Nakajima Aircraft Company.
Since aircraft are an agglomeration of advanced technologies, the company had amassed a group of excellent engineers.
Nakajima Aircraft was disbanded after World War II, but the scattered pieces of the company were pulled together to create Fuji Heavy Industries.

Rabbit Scooter

P1

The Phantom SUBARU

Its sights set on getting into the automobile business, Fuji Heavy Industries created a vehicle whose development code was P-1. Nicknamed the Subaru 1500, it remained an experimental vehicle that was dubbed "the phantom car."

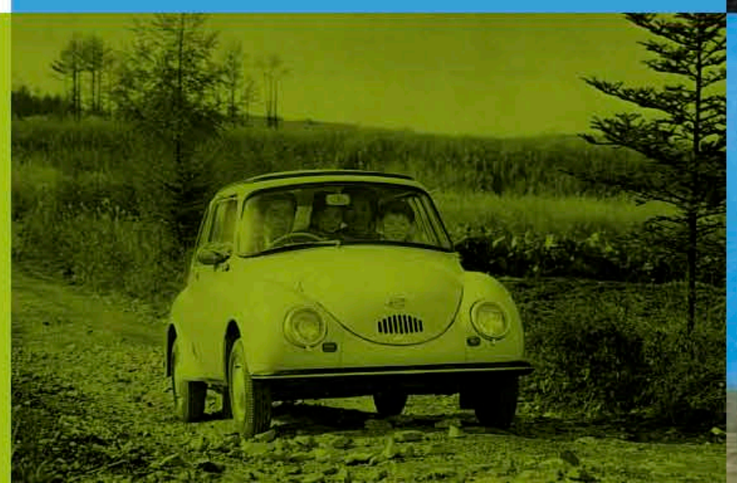
King Dyna

1958

In 1958, Fuji Heavy Industries developed and brought to market its first mass production vehicle, the Subaru 360. This marked the birth of Subaru as a manufacture of mass-produced cars. Using packaging technology that took its cues from aircraft engineering, the car combined a small body with a 360 cc engine while maximizing the space for the car's occupants and providing sufficient acceleration. It led the way for attaining a high level of car ownership in Japan.

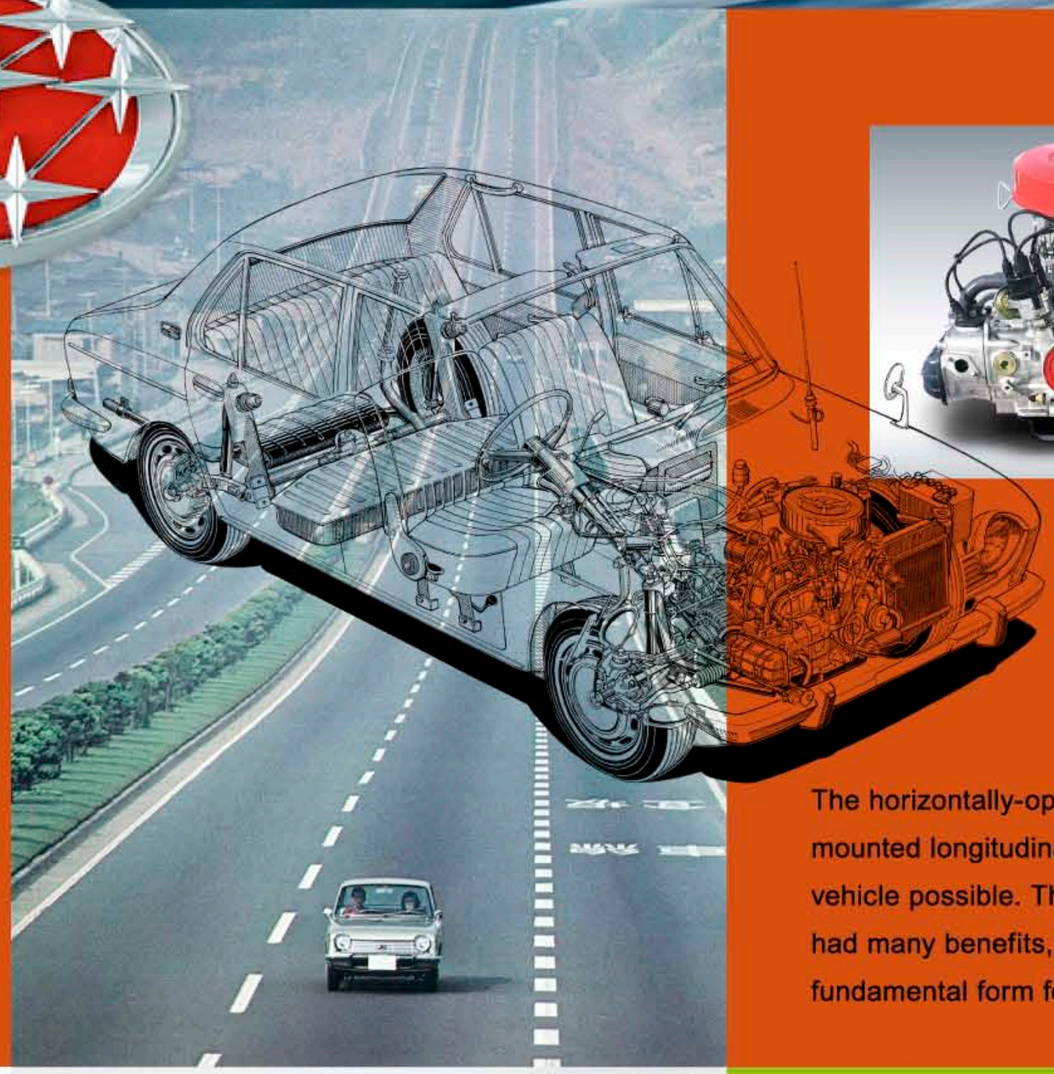
SUBARU 360

Made to satisfy the Japanese standard of the time for mini-vehicles, it allowed up to four people to get around on a 360 cc engine. It was the crystallization of technology that had been subjected to thoroughgoing weight saving.



1959 – 1969

With more and more Japanese owning automobiles, Subaru got into the development of cars bigger than mini-vehicles. With RWD vehicles accounting for most of the automobiles on the market at the time, Subaru moved ahead of the times with its choice of FWD. The engine that was installed was of the horizontally-opposed type that even today remains at the core of Subaru mechanisms.



SUBARU BOXER

The horizontally-opposed engine had to be mounted longitudinally to make a FWD vehicle possible. The choice of this layout had many benefits, and it became the fundamental form for subsequent Subarus.

R2

SUBARU 1000

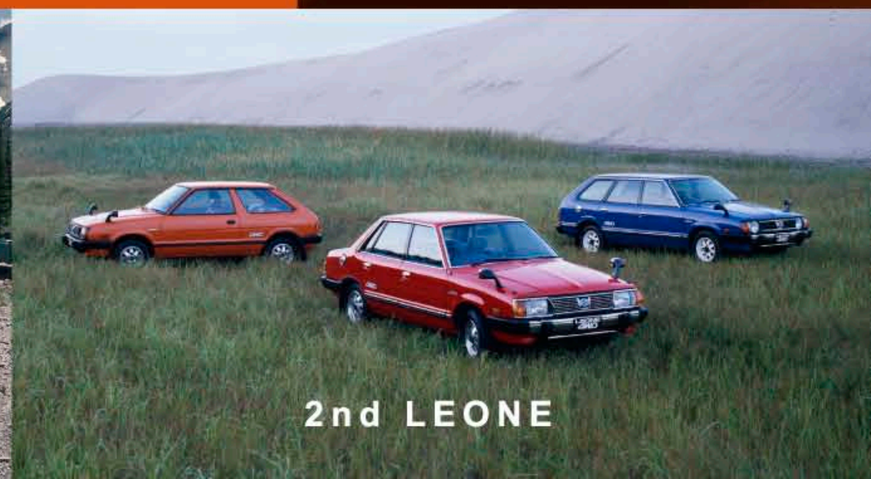
SAMBAR

1970 – 1979

Using a longitudinal layout for the horizontally-opposed engine made possible an AWD vehicle with good bilateral symmetrical balance without adding a complex mechanism. It was a technological advance, and this basic layout continues to be used unchanged in today's Subarus.

SYMMETRICAL AWD

At the time, for a vehicle to be AWD meant it had some special use, and there was no particular desire for such cars to be comfortable. Then in 1972, Subaru brought to market the Leone, which was equipped with AWD even though it was a general passenger car. This was the birth of the symmetrical AWD. That was an age of innovation when it came to how cars were used.



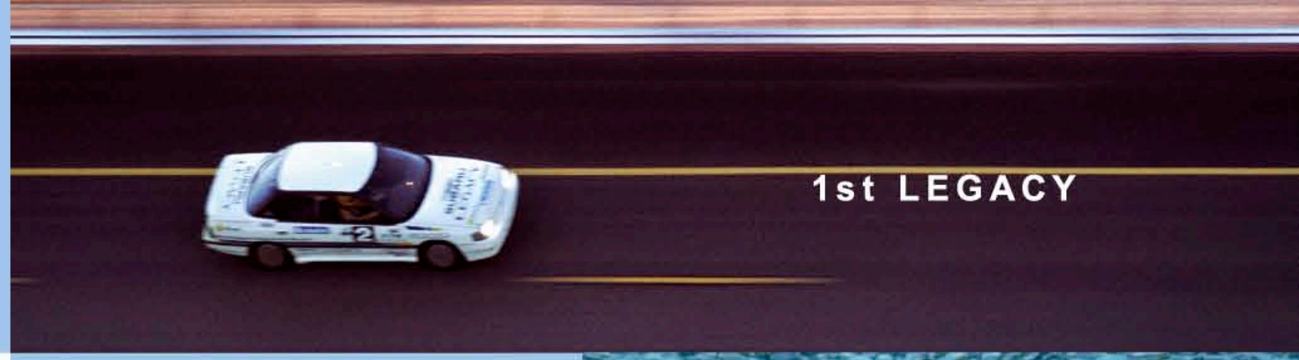
1980 – 1989

The 1980s was an era that saw us make further advances in the concept of a passenger AWD with the development of the symmetrical AWD. Seeking to switch to full-time AWD and electronic control thereof, in 1989 we released the Legacy equipped with the second-generation Subaru Boxer, the EJ engine. Furthermore, we were the first in the world to make practical use of a CVT transmission, a global-scale demonstration of our technology prowess.

Electronically Controlled AWD

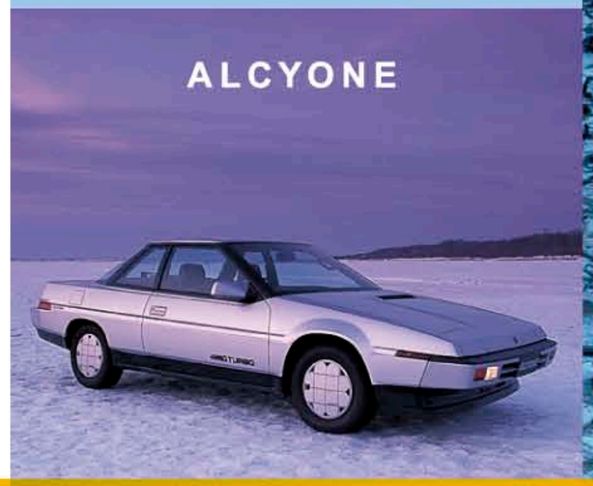
The Alcyone is equipped with active torque split AWD, which uses electronic controls to adjust the distribution of driving force between the front and rear wheels. This AWD technology was a breakthrough for its time, and it remains the core technology for Subarus today.

CVT



1st LEGACY

EJ Engine



ALCYONE

JUSTY

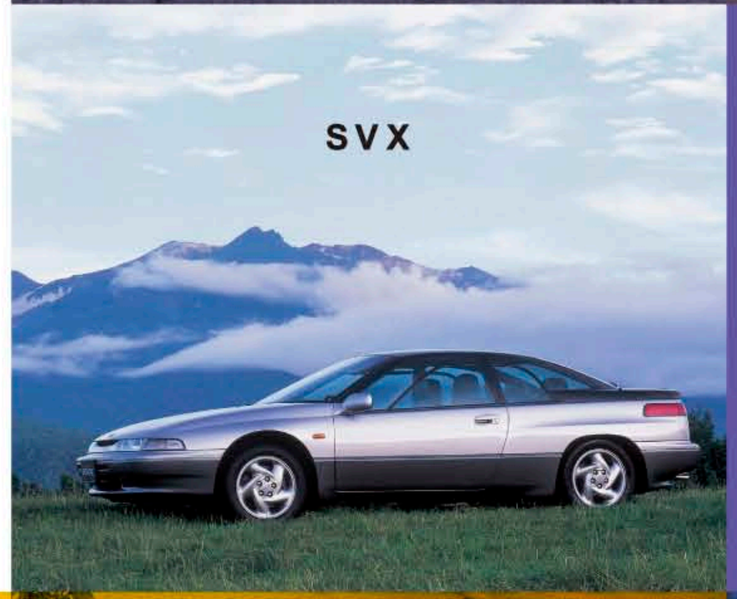
DOMINGO

1990 – 1999

1st IMPREZA

Grounded in the superb driving performance of the symmetrical AWD in all weather conditions, Subaru expanded the field for passengers with the production of vehicles offering the possibility of new lifestyles. In particular, the Outback released in 1995 was a harbinger of the times and won new Subaru fans around the world.

SVX

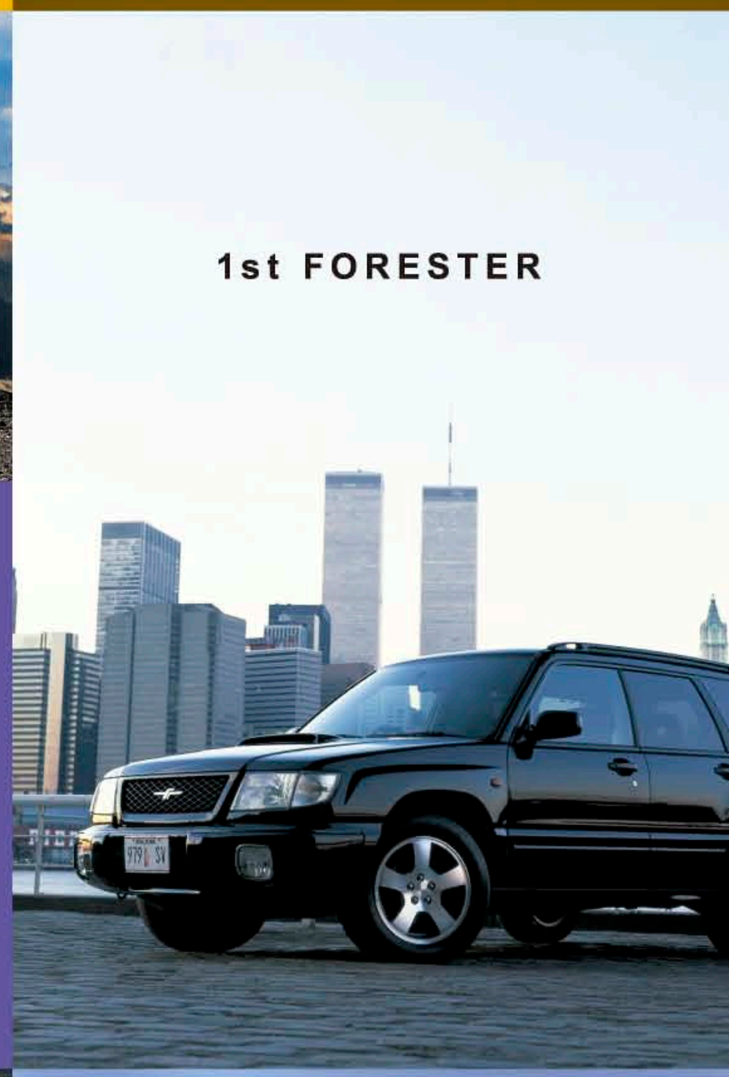


Cross Over

The 1995 Outback was a "cross over" vehicle in that paired the power and functionality of an SUV with the comforts of a passenger car. That philosophy is linked to modern-day global trends for SUVs.

2nd LEGACY

1990 – 1999



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Best of Both

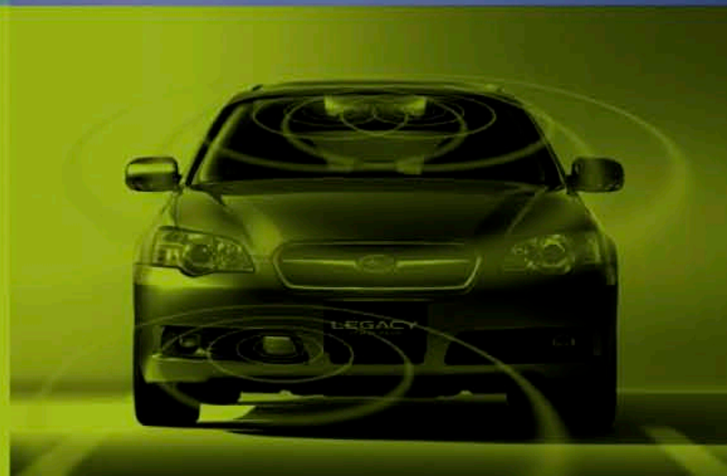
Riding on the success of the Outback, in 1997 Subaru released the Forester. "Best of Both" formed the underlying concept, the goal being to match performance capable of going off road with excellence when traveling on-road.

2000 – 2009

As the new millennium began, Subaru came up with a succession of innovative technologies in its quest for ever higher quality including a stereo camera-equipped ADAS and the horizontally-opposed diesel engine. The advances in safety performance in particular won great acclaim around the world.

ADA

Moving ahead of the times, in 2000 we came up with a commercially viable ADAS that uses a stereo camera. The ongoing research that had begun in the 1990s and continued for over twenty years would later come to fruition in the EyeSight.



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SI-DRIVE

This system makes it possible to easily change engine characteristics from sporty to fuel-efficient running performance with a flick of the switch.

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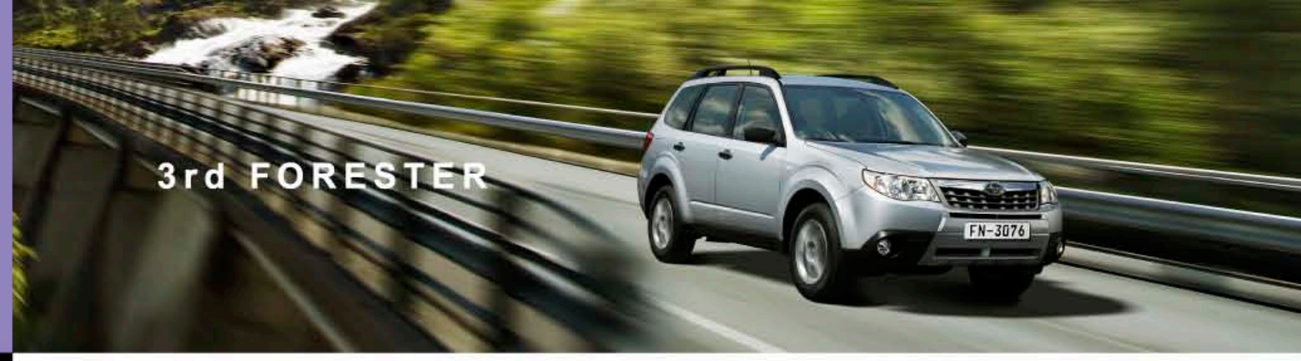
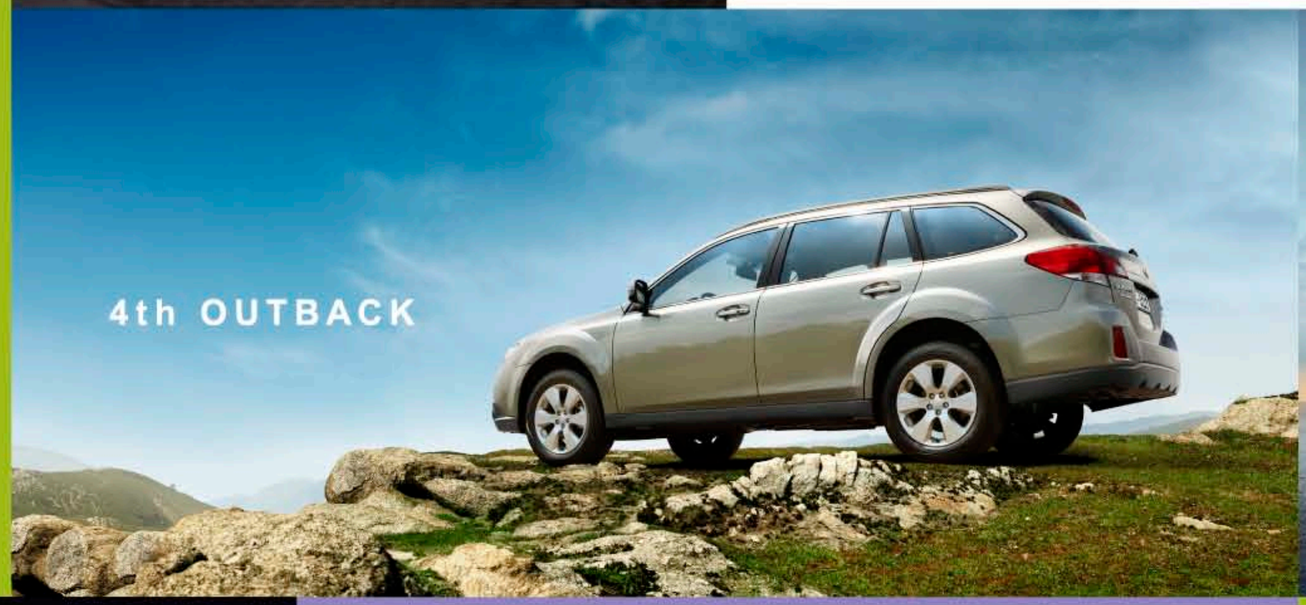
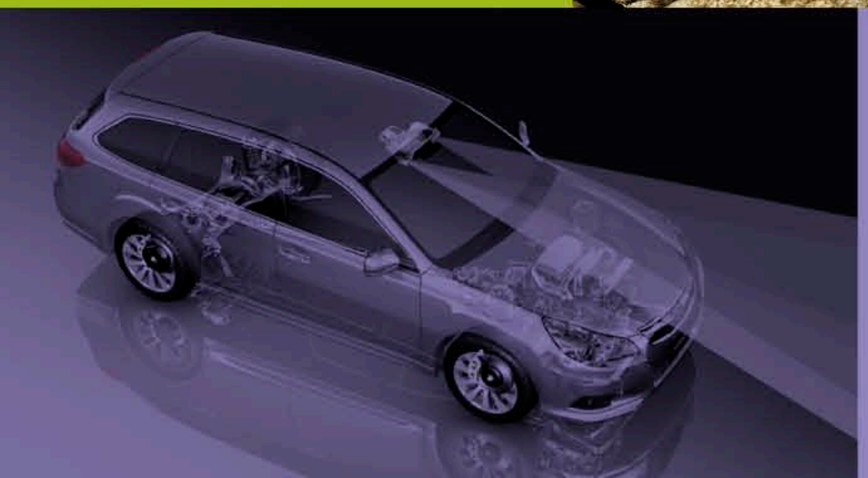


BOXER DIESEL

The world's first horizontally-opposed diesel engine in a mass-produced passenger car. It provides the low vibration you would expect of the Boxer and smooths out the feel of the engine's rotation.





EyeSight

An integrated ADAS that aids drivers in many ways, such as by letting them what is front of the car with a stereo camera, collision mitigation brakes, and adaptive cruise control.

2010 – Now

For well over 50years, Subaru remains dedicated to making reliable vehicles, while also continuing to innovate for a new era. The challenge for us remains one of creating even more appealing vehicles so we can deliver to our customers safety and pleasure.

FB Engine

4th IMPREZA

SUBARU XV

SUBARU BRZ

4th FORESTER

SUBARU BRZ

An RWD sports car created by Subaru. Taking advantage of the unique features of the horizontally-opposed engine, we used its "ultra-low-centered packaging" to achieve excellent handling.

2010 – Now

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SUBARU XV HYBRID

4th WRX

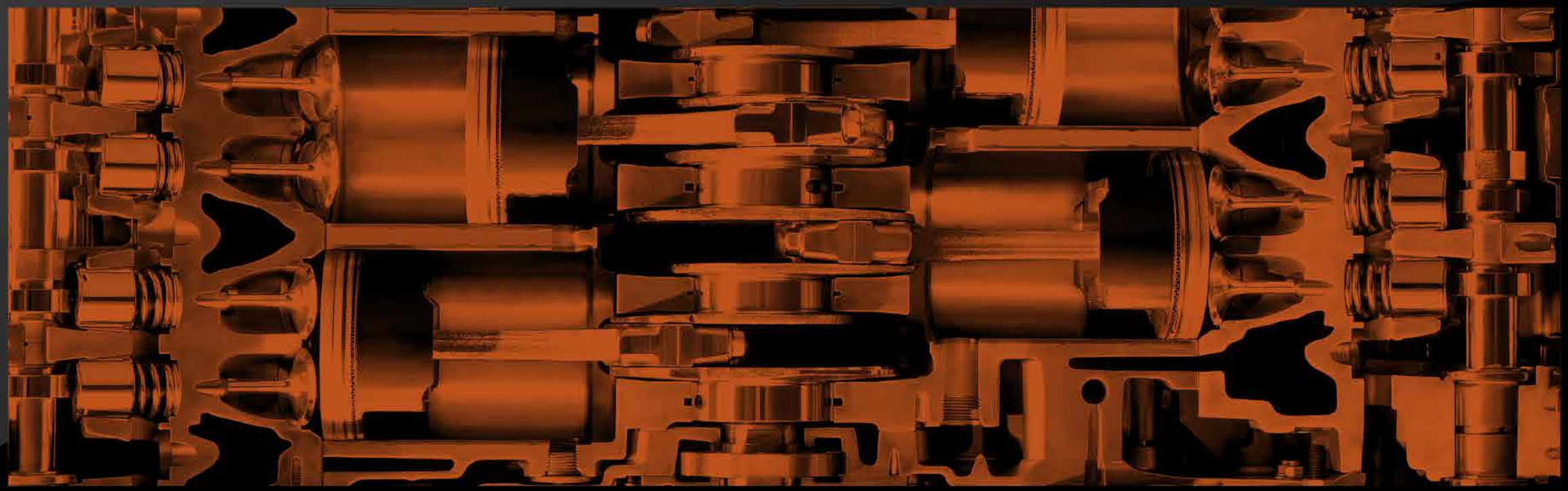
Hybrid System

The hybrid system, which is introduced in the “Subaru XV HYBRID”, is uniquely developed by Subaru; the motor and battery are equipped symmetrically while maintaining the Symmetrical AWD’s low center of gravity and superior weight balance.

4th WRX STI

6th LEGACY

5th OUTBACK



TECHNOLOGY

SUBARU BOXER

SYMMETRICAL AWD

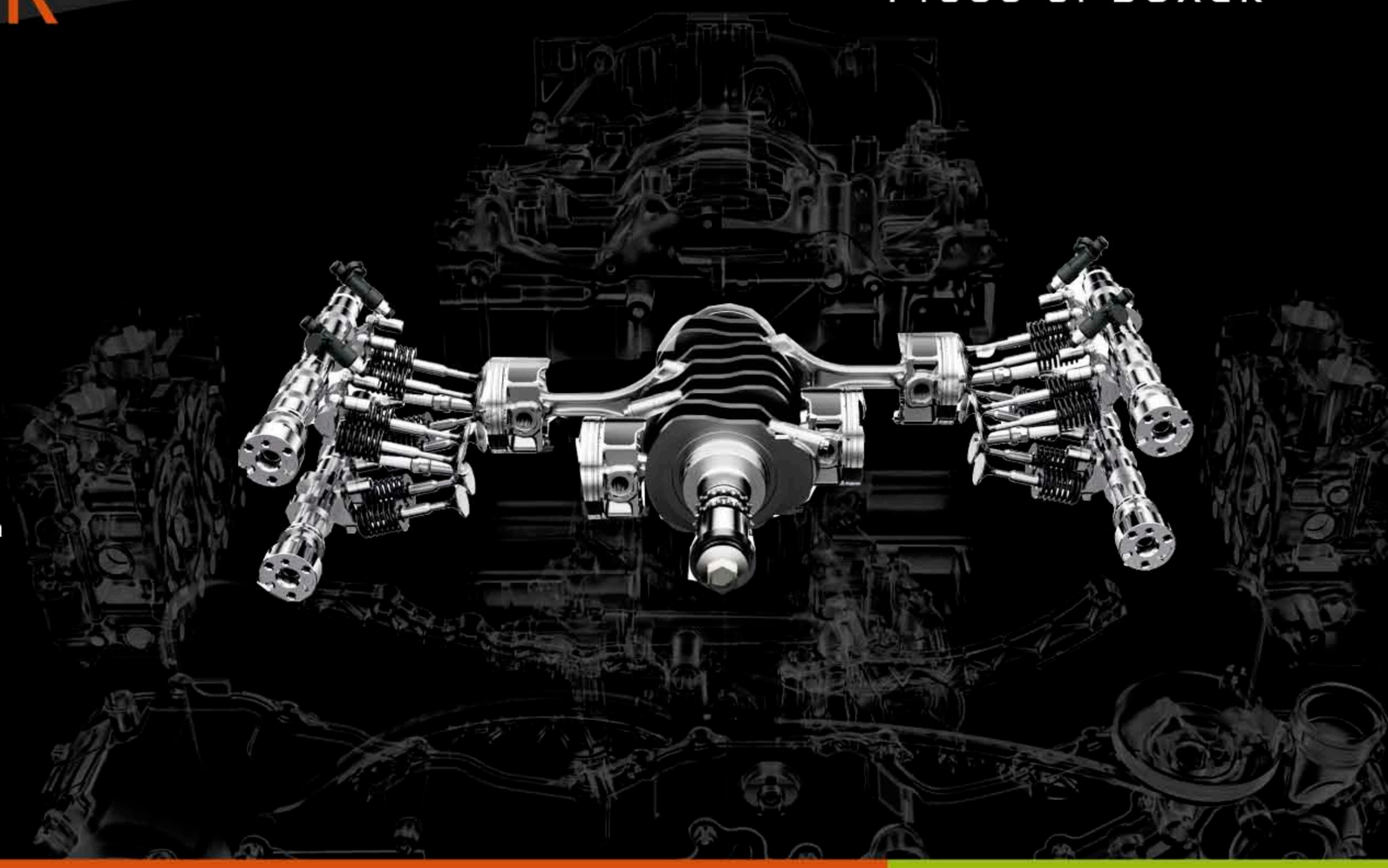
EyeSight

SUBARU BOXER

Proud of BOXER

Why "Boxer"?

Our horizontally-opposed engine is known by the nickname of "Boxer." This derives from the unique layout of the pistons in which half arranged horizontally on both sides.
Because the way these pistons move look just like a boxer delivering right-left punches, the engine was dubbed the Boxer.



4 Cylinder Engine

1966

EA engine

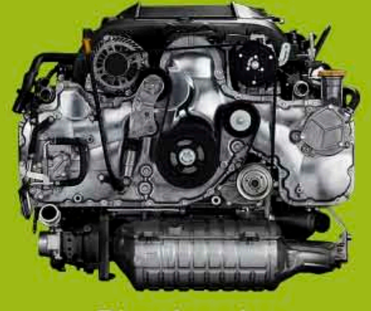
1989

EJ engine

2010

FB/FA engine

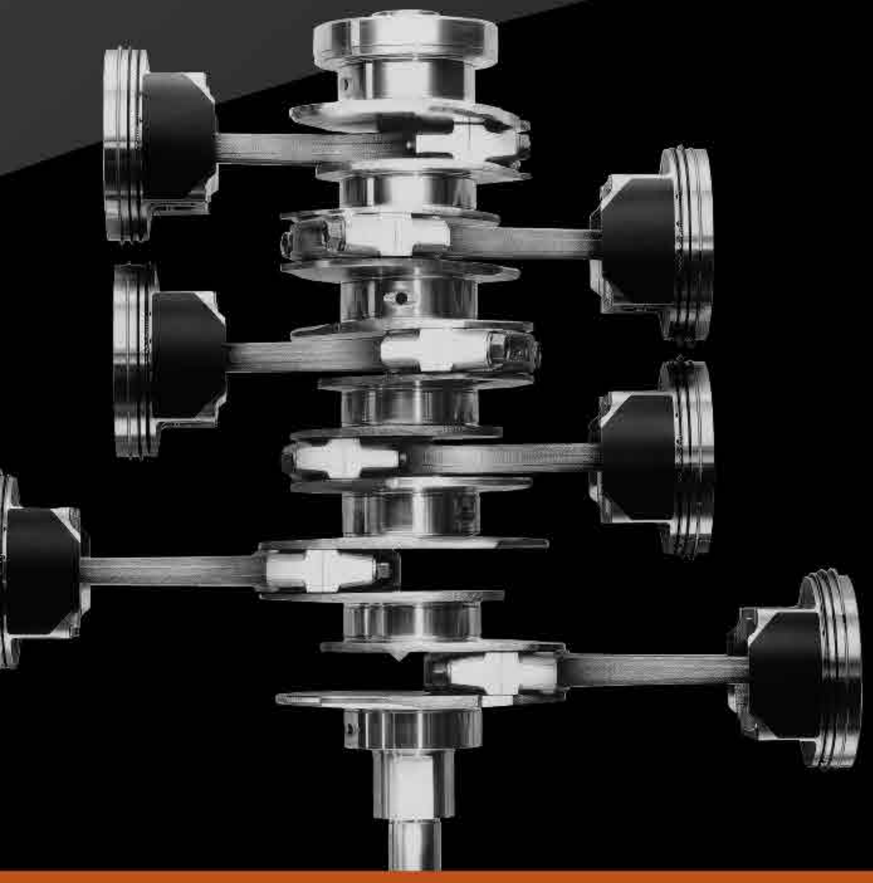
2007



Diesel engine

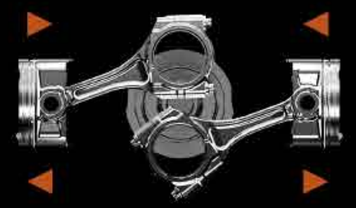
SUBARU BOXER

Proud of BOXER



Low vibration

The construction of the horizontally-opposed engine involves pistons lined up horizontally on both sides so as to achieve a balance between the two sides when the engine is rotating. This keeps the engine from vibrating too much when it is rotating, and provides a smooth rotation feel.



Low center of gravity

A low center of gravity keeps the car stable. The horizontally-opposed engine has the effect of lowering the overall center of gravity of the car owing to its low overall height compared to in-line and V-type engines.

6 Cylinder Engine

1987

ER Engine

1993

EG Engine

2000

EZ Engine

2013

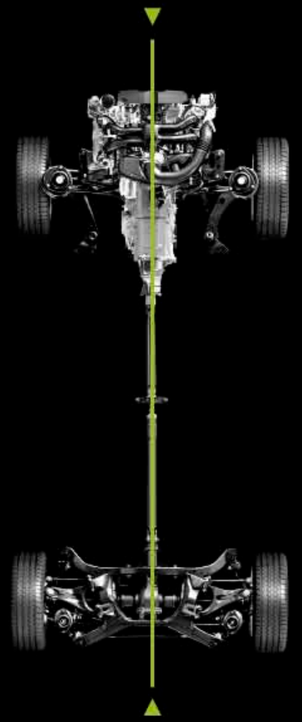
HYBRID SYSTEM

SYMMETRICAL AWD

SYMMETRICAL AWD

The balance of bilateral symmetry

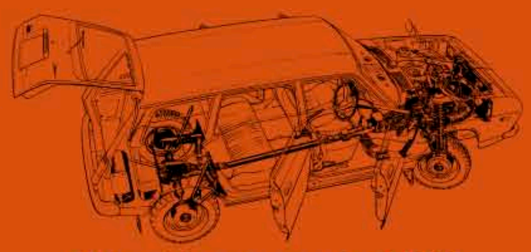
The Subaru AWD has bilaterally symmetrical layout, with the engine, transmission, and center differential gear arrayed in a straight line. This makes it possible to achieve a good right-left balance and reliable maneuverability.



Moving heavy loads to the center

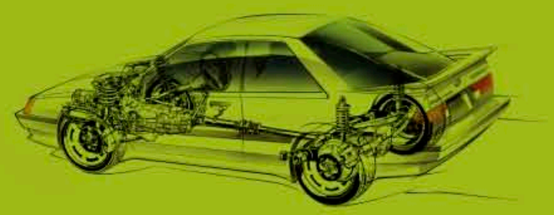
When heavy loads are placed somewhere away from the center, the laws of inertia operate to make the car difficult to start moving and difficult to stop. With symmetrical AWD, such heavy objects as the engine and transmission are positioned closer to the center making for a more limber drive.

1972



Birth of the symmetrical AWD

1986



Switch to full-time AWD

1987

Switch to electronic control

1993

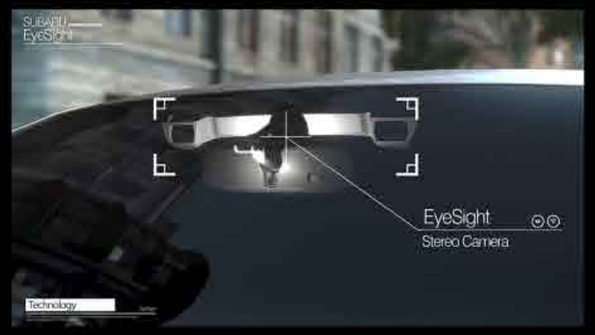
VTD-AWD

EyeSight

EyeSight
Driver Assist Technology

Driver Assist Technology

The EyeSight is a driving support system that either prevents accidents or minimizes the damages resulting from collision, using originally developed Stereo-camera device, which detects objects in the front of the vehicle. Subaru has developed the EyeSight since 1989 when people were not so interested in safety technology.



History Of EyeSight

1989
Begins the development of driving support system.

1999
"Active Driving Assist", the previous system of EyeSight is launched.

2003
New ADA utilizing together radar and stereo-camera is introduced.

2008
"EyeSight" utilizing the world's first auto-braking system by stereo-camera is produced.

2014
Next generation EyeSight is introduced.

MOTOR SPORTS

JAPAN GP

SAFARI RALLY

WRC 1990-1993

WRC 1995-1997

WRC 2001 / 2003

SUPER GT

Japan GP

SUBARU 360

Subaru first took up the challenge offered by motor sports with its entry in the 1963 Japan Grand Prix. Subaru 360s were entered in the 2nd Japan Grand Prix, achieving a 1st and 2nd finish in the T-1 category.

Safari Rally

LEONE

Subaru has taken part in the Safari Rally as a way to demonstrate in a demanding field how well its symmetrical AWD performs. Our car won Group 1 in 1980, the first year we participated.

WRC

World Rally Championship

1990-1993

We began our participation in the WRC in 1990. After a series of hard-fought races, we finally picked up our first 1st place WRC finish in 1993 at the New Zealand Rally.

WRC

World Rally Championship

1995-1997

Starting in 1995, Subaru won the manufacturer's championship three years in a row. In 1995, Colin McRae became the youngest winner of the driver's championship in history.

WRC

World Rally Championship

2001 / 2003

Richard Burns won the driver's championship in 2001 and Petter Solberg did the same in 2003. By the time it wrapped up its participation in the events in 2008, Subaru had produced three driver's champions and scored 47 overall victories in all.

SGT

SUPER GT

Subaru has participated in the Super GT, which is the most popular motor sport of all in Japan. Starting in 2012, it has been taking on the event using a vehicle based on the Subaru BRZ.

SUBARU

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