

# **SUBARU**®

## Public Relations

Subaru Plaza, PO Box 6000, Cherry Hill, NJ 08034-6000

# News Information

For More Information Contact:  
Steve Davis  
(609) 488-8615

For Immediate Release:  
April 20, 1989

### **SUBARU INTRODUCES NEW LEGACY**

#### New from the ground up

The 1990 Legacy is the all-new Subaru entry into the popular compact sedan and station wagon market. In the Subaru tradition of providing excellent value, the Legacy will include standard equipment which is unexpected in this class. The Legacy will compete with the other compact cars in the market such as the Toyota Camry, Honda Accord, and Mazda 626.

The Legacy will be available in a front-drive version with either a 4-speed electronic automatic or 5-speed manual transmission. And, like all Subaru models, both sedan and station wagon will be optionally available with four-wheel-drive -- in both automatic and manual transmission versions.

#### **Market Position**

The Legacy slots into a very competitive size and class market. Legacy comes into the marketplace with several distinct advantages. It is built from the ground up in the Subaru tradition of dependability, reliability, and high value. Larger than previous Subaru cars, Legacy is competitive in interior room and trunk space with other compact automobiles. Under the

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hood, the Legacy is equipped with a more powerful standard engine than its competitors. Legacy features the stopping power of a standard disc brake at each wheel, while other compacts make do with rear drum brakes.

The Legacy will attract previous Subaru owners who desire to move up in size, comfort, and features while keeping the Subaru benefits of reliability and good value. The high value, aerodynamic styling, and user-oriented technology of the Legacy will also attract other import and domestic buyers.

Following the introduction of the new Legacy, Subaru will introduce the 1990 models of the current Sedan, Wagon, and 3-Door Coupe which will be badged as the Loyale. The Loyale will be offered in one trim level, a combining of the previous DL and GL trims. Legacy will, in effect, replace the former GL and GL-10 equipment levels. As a result, the 1990 Subaru lineup, from bottom to top, will be Justy, Loyale, Legacy, and XT.

#### **World Speed Endurance Record**

Subaru recently demonstrated the durability and performance of the Legacy and its new engine by setting a new World Speed Endurance Record of an average 138.78 mph over 62,120 miles (100,000 kilometers) in 18 1/2 days, surpassing the previous mark of 132.45 mph set by a Saab 9000 Turbo in 1986. The record-setting Legacy cars were four-wheel-drive RS sedans outfitted with quick-fill 37-gallon fuel tanks as well as several features designed for the high-speed run, among them shorter, stiffer springs and shock absorbers, roll cage, and a front air dam. The three relatively stock

Subaru cars circled the desert course near Phoenix, Arizona day and night, stopping every two hours for refueling and a driver change. All three cars ran like clockwork throughout the two-and-a-half-week endurance test, and all three broke the earlier record.

#### **4-valves Per Cylinder**

Powering the Legacy is a new-design, horizontally-opposed 4-cylinder engine. This 4-valve-per-cylinder, single-overhead-camshaft engine puts out 130 horsepower with an equally impressive 137 lb./ft. of torque. This compact, high-torque powerplant achieves these numbers with minimal noise and vibration, due in part to a crankshaft that is only about a foot long, and yet is carried in five main bearings. Multi-point fuel injection and distributorless ignition, under the control of the advanced Subaru Electronic Engine Management System, make for excellent performance and fuel economy.

#### **Four-Wheel Independent Suspension**

The Legacy chassis received as much engineering attention as the engine. At the front, coil spring MacPherson struts with L-shaped control arms reduce vibration and maintain good wheel geometry. Vibration feedback is further reduced by silicone-filled pivot bushings on each L-arm. Rear suspension is coil-over strut, with each wheel located by a trailing arm and two parallel links. Both the sedan and the wagon feature power rack-and-pinion steering, stabilizer bars at the front and rear, and four-wheel disc brakes. Legacy LS station wagons equipped with 4WD and the optional

automatic transmission go the competition one better with electronically-controlled air suspension.

#### **Standard 4-Wheel Disc Brakes**

Stopping the Legacy are four-wheel disc brakes. Like all Subaru models, the Legacy is equipped with ventilated front discs. The standard, rear disc brakes are one of the features that set the Legacy apart from other cars in its class. Another feature on the Legacy is a drum-type parking brake inside the rear disc rotor, a design normally found on automobiles in the Mercedes-Benz, Corvette, and Porsche class. Wrapping up a state-of-the-art braking system are four-channel anti-lock brakes available as an option on the 4WD/automatic LS Legacy.

#### **More Than Skin Deep**

The beauty of the Legacy body is designed to stay that way for a long time. First, the body/chassis is built to be a strong, lightweight structure. Increasing the number of spot welds used in the Legacy over those found in other cars results in a body that resists torsional forces from poor road surfaces. Extensive rustproofing measures include galvanized steel, underbody and inside door wax coating, PVC coating on floor panels, and wax-filled body/frame sections.

Subaru stands behind the Legacy with a 36-month, 36,000-mile bumper-to-bumper limited warranty and a 60-month, 60,000-mile limited corrosion warranty.

### **Comfortable Space**

The Legacy is the first automobile from Subaru with a wheelbase over 100 inches. Both the sedan and station wagon were designed to maximize that space for driver, passenger, and luggage. Interior design was planned to complement the exterior styling. Controls are placed logically for ease of use, and creature comforts abound. For instance, rear passengers have the benefit of four floor-mounted heater outlets. A tilt steering wheel with a memory feature is standard on all but the base Legacy. Rear seats in the LS station wagon are split 60/40, with a trunk-through feature on the LS 4-door sedan.

### **The Subaru Difference**

Subaru of America is unique in the automotive industry -- it's still the only American-operated, publicly-owned import car company, and its stock is traded on the national over-the-counter market. Subaru is also the only auto company to offer both a front-wheel-drive and four-wheel-drive version of every car it sells. Subaru of America markets its automobiles and products through a network of regional distributors serving nearly 800 dealers nationwide.

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For Immediate Release:  
April 20, 1989  
ENGINE RELEASE

### A NEW ENGINE FOR LEGACY

#### Smooth power

The Subaru Legacy engine design began on a clean sheet of paper. This is an all-new engine from the oil pan to the top of the fuel injection air flow meter. The only thing shared with previous Subaru engines is the horizontally-opposed cylinder layout, which offers a low center of gravity, reduced vibration and noise, lighter weight and shorter length.

#### **Rigid, Strong Cylinder Block**

The Legacy engine is an extremely rigid structure. Two aluminum-alloy crankcase halves cradle the forged steel crankshaft, which is supported by five main bearings. Since the horizontal engine is so compact, the crankshaft is only about a foot long, which makes for a very strong assembly. Each aluminum cylinder head houses its own camshaft. Four valves do the breathing for each of the cylinders. The camshaft operates the valves through a unique rocker arm assembly. Although each intake valve has its own rocker arm, exhaust valves are operated by a forked rocker arm that handles two valves simultaneously. Tiny hydraulic lash adjusters, no larger than a conventional lash adjusting screw, eliminate valve adjustment. The

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1990 Subaru Legacy Engine Release, page two

camshafts are driven by a toothed, reinforced-rubber belt, with the back side of the belt performing double duty by driving the water pump. A self-contained hydraulic tensioner makes the timing belt maintenance-free.

**Pentroof Combustion Chamber**

The 4-valve design fosters more efficient combustion. This is enhanced by a centrally-located spark plug in the pentroof combustion chamber. Recognized as the optimum, a crossflow intake and exhaust port design was chosen for the Legacy engine. Further tuning of the intake tract and exhaust manifold design contributes further to engine breathing.

Fuel is metered by individual cylinder, sequential fuel injection. A mass airflow sensor measures the amount of air entering the engine, and this measurement, along with inputs from several sensors, allows the ECU (electronic control unit) to decide how much fuel to inject and when. The sensor array on the Legacy engine includes a crankshaft angle sensor, camshaft angle sensor, knock sensor, throttle opening sensor, vehicle speed sensor, barometric sensor, and oxygen sensor. The ECU uses input from the crank and camshaft sensors to time the firing of the spark plugs via the twin-coil, distributorless ignition system.

The high-torque Legacy engine is equally at home in rush-hour traffic or the high-speed banking of the Arizona Test Center, where the car recently established a new world speed endurance record.

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# News Information

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FOR IMMEDIATE RELEASE:  
Friday, March 3, 1988

### SUBARU WORLD SPEED ENDURANCE RECORD CONFIRMED

It's official! Subaru has set a new world record for the land speed endurance run of 100,000 kilometers -- over 62,000 miles. Confirmed by the Federation Internationale de l'Automobile, the world governing body for motorsports, a new Subaru Legacy model topped the old record with an average speed of 138.78 miles per hour for more than 18 days.

The average speed included time for driver changes and refueling, and the new record is roughly equivalent to crossing the U.S. more than 20 times in less than three weeks!

Three Legacy cars ran the 5.7-mile oval at the Arizona Test Center, and all three vehicles broke the previous record of 132 mph set by a Saab 9000 Turbo in 1986. The record-setting Legacys were production four-wheel-drive RS sedans with a few modifications for the high-speed run, among them quick-fill 37-gallon fuel tanks, shorter springs, stiffer shock absorbers, roll cage and a deeper aerodynamic front air dam. The relatively stock Subaru sedans circled the desert course day and night, running like clockwork over the two-and-a-half-week endurance test.

Subaru of America President Thomas R. Gibson said, "Setting the new endurance record underscores Subaru's long-standing reputation for durability and reliability, not to mention demonstrating the performance of the new Legacy. This achievement also showcases the engineering expertise of our manufacturing partner, Fuji Heavy Industries."

The Legacy is an all-new Subaru Sedan/Wagon line which will make its U.S. debut this coming April. Introduced to the Japanese market in January, the sleek new Legacy features a sixteen-valve, opposed four-cylinder engine, and like all Subaru models, is available with either front-wheel drive or full-time four wheel drive.

The Subaru record project was sanctioned by FIA and ACCUS -- the Automobile Competition Committee for the United States -- and was supervised by the U.S. Auto Club.

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NOTE TO EDITORS: Black & white as well as color photos are available by overnight mail by calling 609/488-8660.

1990 SUBARU LEGACY  
SEDAN & STATION WAGON

EPA FUEL MILEAGE RATINGS

		CITY	HIGHWAY	COMBINED
FWD	5-SPEED	23	30	25
	4EAT	21	28	24
4WD	5-SPEED	*21/20	*27/26	23
	4EAT	20	*26/25	22

\*sedan/wagon

## 1990 SUBARU LEGACY "AT A GLANCE"

### Powertrain/Brakes/Suspension

- o 2.2-liter, overhead-cam, 16-valve, 130-hp horizontally-opposed 4-cyl. engine
- o Liquid-filled engine mounts and front suspension bushings
- o Multi-point, electronic fuel injection
- o Distributorless electronic ignition system
- o Front-wheel-drive or Full-Time 4-wheel-drive
- o 5-speed manual or 4-speed electronic automatic transmission
- o 4-wheel independent coil-spring suspension (air suspension 4WD/4EAT LS Wagon)
- o Stabilizer bars, front and rear
- o All-season radial tires
- o Power rack-and-pinion steering
- o Four-wheel, power-assisted disc brakes
- o Hill-Holder system on all manual transmission cars

### Body/Exterior

- o Unit body construction
- o 5-mph bumpers, front and rear
- o Low-profile halogen headlamps
- o "no-lose" gas cap w/retaining strap
- o rear body vents for easy door closing
- o protective side molding
- o 3-brush window guides for smooth, rattle-free operation
- o Double side-window seals
- o Rear window defogger
- o Rear wiper/washer on wagons
- o Tinted glass

### Interior

- o 5-passenger vehicle
- o Complete analog instrumentation including tachometer
- o Automatic passive restraint system (front seats)
- o Trunk/fuel filler door inside release
- o Retractable drink holder
- o Adjustable head restraints (front seats)
- o Five dashboard vents for A/C and ventilation
- o Four floor-mounted rear heater outlets
- o Side window defroster/defogger vents
- o Rear 3-point shoulder belts (L & R), with center lap belt
- o Rear seat belt storage pocket
- o Fold-down seat back on wagons

### L Equipment

- o Power windows/door locks
- o 60/40 split, fold-down rear seat (wagon)

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- o Digital clock display in radio
- o Dual, remote-control electric rearview mirrors
- o 40-watt ETR AM/FM stereo radio with four speakers
- o Intermittent windshield wipers
- o Passenger-side vanity mirror
- o Memory tilt steering wheel
- o Retractable cargo area cover on wagon

#### L Options

- o Full-Time four-wheel-drive
- o 4EAT automatic transmission
- o Air conditioning
- o Cruise control

#### L Value-Plus Package

- o Air conditioning
- o Cruise control
- o Combination 80-watt AM/FM stereo ETR cassette w/preset equalizer

#### LS Equipment

- o Air conditioning
- o Electronically-controlled air suspension on 4WD wagons w/4EAT
- o Electric sunroof
- o Alloy wheels on 4WD cars
- o Cruise control
- o Power door locks, 2-way
- o Power windows
- o Variable intermittent windshield wipers
- o Electric remote control antenna
- o Driver's seat height adjuster
- o 2-way adjustable head restraints
- o 60/40 split fold-down rear seat
- o "Trunk through" feature (sedan)
- o Rear seat center arm rest (sedan)
- o Dual illuminated vanity mirrors
- o 80-watt AM/FM stereo ETR w/cassette/preset-graphic equalizer on 4WD cars

#### LS Options

- o Anti-lock brakes (four-channel system) on 4WD/4EAT cars
- o Alloy wheels (fwd cars)
- o 80-watt AM/FM stereo ETR w/cassette/preset-graphic equalizer on fwd cars

#### Accessories

- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li>o Alloy wheels</li> <li>o Luggage rack</li> <li>o Bicycle attachments</li> <li>o Mud flaps</li> <li>o Classic cassette player w/logic control</li> <li>o Stereo combo w/2-speaker system</li> <li>o Rear deck spoiler (sedan)</li> </ul> | <ul style="list-style-type: none"> <li>o Air conditioning</li> <li>o Security system</li> <li>o Cruise control</li> <li>o Floor mats</li> <li>o Graphic equalizer</li> <li>o Fog lamps</li> <li>o Rear deck luggage carrier (sedan)</li> </ul> |
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## 1990 SUBARU LEGACY SPECIFICATIONS

### **ENGINE**

Type: horizontally-opposed 4-cylinder  
Block: aluminum alloy  
Cylinder head: aluminum alloy, 4-valves-per-cylinder,  
pent roof combustion chamber  
Valvetrain: belt-driven single-overhead camshafts  
with hydraulic lash adjusters  
Displacement: 135 cu. in. (2212 cu. cm.)  
Bore x stroke: 3.82 x 2.95 in. (96.9 x 75 mm)  
Electrical system: 12-volt system, 70-amp alternator  
  
Horsepower: 130 @ 5400 rpm  
Torque (lb-ft): 137 @ 4400 rpm  
Compression ratio: 9.5:1  
Induction system: multi-point electronic fuel injection,  
Electronic Engine Management  
  
Ignition system: distributorless, electronically-controlled,  
crank-angle sensor, knock sensor

### **BRAKES**

Service brakes: 10.24-inch vented disc, front  
10.47-inch solid disc, rear  
Parking brake: separate drum in center of rear disc

### **STEERING**

All Models: power rack-and-pinion steering  
Turns, lock-to-lock: 3.3  
Turning circle: 33.5 ft (at tire)

### **SUSPENSION**

Front: MacPherson strut with lower L-arm, coil spring\*, stabilizer bar  
Rear: MacPherson strut/coil spring\*, with trailing arm, twin parallel links,  
stabilizer bar

\*air spring for self-leveling air suspension on 4WD LS Station Wagon w/4EAT

### **TRANSMISSION**

Clutch: Single dry plate  
8.86-inch diameter

Gear ratios:

	front-drive <u>5-spd man.</u>	4WD <u>5-spd man.</u>	front-drive <u>4EAT auto.</u>	4WD <u>4EAT auto.</u>
1st:	3.55	3.55	2.79	2.79
2nd:	1.95	1.95	1.55	1.55
3rd:	1.37	1.37	1.00	1.00
4th:	0.97	0.97	0.69	0.69
5th:	0.74	0.74	----	----
Reverse:	3.42	3.42	2.72	2.72
Final drive:	3.70	4.11	3.70	4.11

**DIMENSIONS**

	<u>Sedan</u>	<u>Wagon</u>
Length:	177.6 in.	181.1 in.
Width:	66.5 in.	66.5 in.
Height fwd:	52.6 in.	53.7 in.
4WD:	53.5 in.	54.7 in.
4WD(air sus.):	---	55.9 in.
Wheelbase:	101.6 in.	101.6 in.
Track, front:	57.5 in.	57.5 in.
rear:	57.1 in.	56.9 in.*
*4WD 57.1 in.		
Ground clearance fwd:	4.5 in.	5.1 in.
4WD:	4.5 in.	5.3 in.
(air sus.) 4WD:	---	6.5 in.
Curb Weight*:		
fwd	2620 lb.	2750 lb.
4WD	2830 lb.	2960 lb.
Gross Vehicle Weight:		
fwd:	3930 lb.	4130 lb.
4WD:	4130 lb.	4245 lb.

\*all weights shown are for base, 5-speed vehicles

Drag coefficient: 0.33

**CAPACITIES**

Fuel tank: 15.9 gal.  
 Engine oil (with filter): 4.8 qt.  
 Engine coolant 6.3 qt.

**Luggage capacity:**

    Seat up: 12.8 cu. ft.                      36 cu. ft.  
 4WD:                      -----                      71 cu. ft.

**INTERIOR ROOM (front/rear)**

Seating Capacity: 2 front/3 rear  
 Leg: 42.3/35.4 in. (35.6 in. wagon)  
 Head: 38.2/36.0 in. (37.8 in. wagon)

Shoulder: 54.1/53.7 in.

**TIRES — WHEELS**

front-drive: 175/70 HR 14 -- 14 x 5JJ  
 4WD: 185/70 HR 14 -- 14 x 5.5JJ

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# News Information

## **FACT SHEET**

### **SUBARU-ISUZU AUTOMOTIVE INC. LAFAYETTE, IN**

- SIA is the first joint venture between two Japanese automobile manufacturing companies -- Fuji Heavy Industries Ltd. (FHI) and Isuzu Motors Limited.
- FHI owns 51 percent of SIA; Isuzu owns 49 percent.
- Subaru-Isuzu Automotive Inc. (SIA) is the first major Japanese automobile assembly plant in Indiana.
- Plant construction will be completed April 15.
- Pre-pilot production is scheduled to begin early May 1989.
- Start of production is scheduled for mid-September.
- The plant dedication is scheduled for October, 16 1989.
- All integrated operations from stamping to trim and final assembly will be performed at the 2.3 million square foot facility.
- Subaru and Isuzu will share both the stamping and painting equipment; separate lines for body assembly and trim and final assembly.
- The total investment by both companies totals approximately \$550 million.

- During Phase I, SIA will manufacture 60,000 new Subaru Legacys and 60,000 Isuzu sport utility vehicles and pick-up trucks. A Phase II is planned under which total production may reach 240,000 vehicles annually.
- About 1700 employees will be hired during Phase I. An estimated 3200 people will eventually be hired by the completion of Phase II sometime in the 1990s.
- The Indiana Department of Employment and Training Services is assisting SIA in all aspects of hiring for group and team leaders as well as 1200 production employees.
- Approximately 225 employees have been to Japan for training. Nearly 300 Japanese trainers and technical advisors are coming here for eight to ten months. Approximately 50-60 Japanese will be assigned full-time to the project.
- Thousands of additional jobs and millions of dollars will be added to the local and state economies as satellite companies and retailers expand or move into the area.
- The general contractor is Kajima International Inc. based in Ft. Lee, New Jersey.
- Over 200 contractors and vendors have been assigned to the project. Up to 2000 local building trades have been employed by Kajima International.
- 167,000 cubic yards of concrete were used to build the plant.
- 20,000 tons of structural steel were used in the construction of the plant; most from northern Indiana.