MAZDA MOTOR CORPORATION

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www.mazda.com

MAZDA MX-5

MAZDA MOTOR CORPORATION
ESTD. 1920 Hiroshima, Japan

We believe in the power of human potential;
creativity, imagination and the amazing things
we're all capable of when we're inspired.

We believe in taking the unconventional road
and going the extra mile to do work that inspires.

We believe in artisans, designers, engineers and ambassadors
who pour human energy into their work.

We believe in the power of cars to move human emotions.
To awaken senses, heighten reflexes, make pulses race.

We believe the joy of being alive comes from
what we discover on our journey,
and the inspiration we find in every mile.

MAZDA MAKES YOU FEEL ALIVE.

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THE OPEN AIR, THE MAZDA WAY

One shining inspiration runs throughout the whole of Mazda MX-5's long and storied history: the purest expression of the lightweight, open-top sports car's fun-to-drive character. And the latest models bring that unmatched pleasure to an even wider range of drivers, stimulating hidden emotions and awakening dormant sensibilities. In particular, Mazda's trademark *Jinba-ittai* handling and eco-friendly performance are assured by Skyactiv Technology which continues to set the pace in automotive engineering. Technically, aesthetically, emotionally — Mazda MX-5 and MX-5 RF* are a tour de force like no other car on the road, offering a truly unforgettable experience. An experience you owe it to yourself to discover.

*RF stands for "Retractable Fastback".

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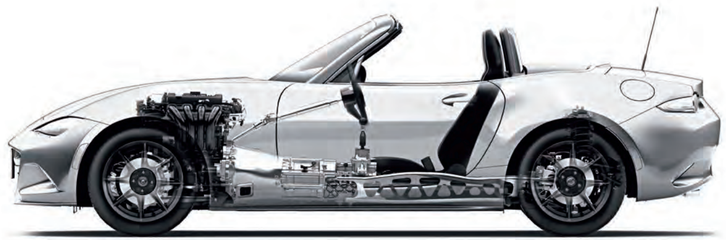
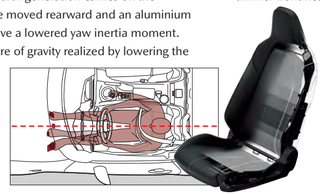
THE REDEFINITION OF DRIVING PLEASURE

First and foremost, development focused on creating a driving experience only the MX-5 series could offer, through response and handling that precisely match the driver's intentions. The aim was simple: to make the vehicle feel like a natural extension of your body. Enhancing Mazda's trademark *Jinba-ittai* — the feeling of being one with car — and fun-to-drive characteristics were the watchwords, even as successive models met the challenge of satisfying ever-higher demands for comfort, safety and environmental friendliness. Of course, weight was kept as low as possible, while the latest advances in Skyactiv Technology keep the suspension, body and powertrain acting in perfect harmony. Taken together, it all adds up to a total redefinition of sports car driving pleasure.



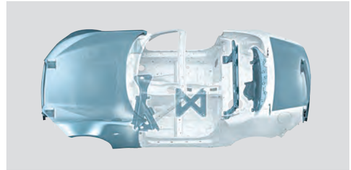
REFINING THE CLASSIC LIGHTWEIGHT SPORTS CAR

From the very first generation, Mazda MX-5 has always featured a compact, open-top two-seater body, a Front-midship engine/Rear-wheel drive (FR) configuration, and near-perfect 50:50 front/rear weight distribution — the classic layout of a lightweight sports car. The fourth generation carries on the tradition, but with the engine moved rearward and an aluminium bonnet and boot lid to achieve a lowered yaw inertia moment. Combined with a lower centre of gravity realized by lowering the engine's mounting position and the seats, this results in the kind of response and handling drivers dream about. Another key element adding to the commanding feeling of control is the driving position: the driver is placed closer to the car's centre line, the steering column features telescopic adjustment, and the pedals, controls, meters and displays are optimally located to allow the driver to maintain good posture and drive comfortably. Additionally, the low nose, rearward position of the A-pillars and thinner front header afford a panoramic view for easier confirmation of the surroundings and the car's behaviour. The seats themselves feature Mazda's innovative and ergonomic S-fit Structure, employing a net material and urethane pads in place of the conventional metal springs/urethane pad structure. This reduces both the weight and thickness of the seats at the same time as providing superior support and holding capability when driving hard through the curves.



SAVING WEIGHT, ADDING PERFORMANCE

Skyactiv Technology, long years of experience and Mazda's proven 'Gram strategy' allowed a significant weight reduction for the current generation. Optimal distribution of functions, introduction of compact components, structural innovations, and wider use of aluminium and other lightweight materials resulted from Mazda's pursuit of the ideal structure for the body, chassis and engine. And by further advancing the Skyactiv-Body concept of a continuous framework, this reduced weight even resulted in greater rigidity. Measures taken included optimizing the framework, larger cross-sections and straighter lines for the high-mount backbone frame, and more extensive use of high-tensile sheet steel, as well as integrating the chassis and the body. In particular, MX-5 RF has a dedicated tunnel member specifically developed to handle the changes in front/rear rigidity stemming from the retractable hardtop.



SKYACTIV TECHNOLOGY

SKYACTIV-G 2.0

Higher-revving, higher-power performance with lively response right up to the red line and smooth acceleration in any gear is the promise. And the evolved Skyactiv-G 2.0 direct-injection petrol engine delivers in full measure, taking you to a world of exciting and satisfying driving. The intake system features a common-type intake port to maximize air intake volume, while the 4-2-1 exhaust system with specially designed exhaust port greatly reduces pumping loss. Inertial mass and mechanical resistance are reduced thanks to lightweight pistons and connecting rods. Combustion characteristics and anti-knock capability are enhanced by piston heads that strengthen tumble swirl and reduce unburned fuel. And high-diffusion fuel injectors with a three-stage split fuel injection control scheme minimize waste while promoting secure fuel vaporization. These innovations add up to dramatically improved performance: the engine revs more smoothly to its increased maximum of 7,500rpm for an impression of power and a feel of effortless and limitless acceleration, maximum output is raised, torque is increased from low to high engine speeds, and fuel efficiency is further improved. The extraordinary compression ratio of 13.0:1 is retained, even as the knock usually caused by such high compression is suppressed. A low-inertia dual-mass flywheel delivers sharp and agile engine response, as well as a clear engine tone. And the main silencer system contributes a linear engine note to accelerator inputs, promoting greater unity with the MX-5.

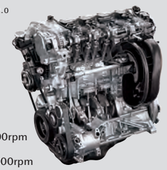
SKYACTIV-MT

The new-generation six-speed manual transmission Skyactiv-MT was originally developed to bring the same light positive shifting enjoyed in previous generations of the MX-5 to a broader lineup of Mazda cars, achieving this through a complete redesign of the internal shift mechanism for more efficient action and minimum friction. That design has been painstakingly reviewed to fit the FR layout and realize crisp, 'just right' operation with a positive feeling as if the lever is guiding itself in to your desired gear. In addition, adoption of a direct-drive sixth gear contributed to a simpler structure that is both lighter and more compact.

SKYACTIV-BODY

The goal was lower weight with better safety performance and greater rigidity, achieved by clever engineering to optimize structures and make effective use of materials. And through applying all the knowledge acquired in developing Skyactiv Technology to date, Mazda engineers created a new Skyactiv-Body specifically tailored to an open-top lightweight sports car. The basic concept was to use straight beams and a continuous framework wherever possible to create a structure whose individual sections functioned in perfect harmony. In addition, widespread use of aluminium and high-tensile steel enhances both safety and rigidity, resulting in a lightweight open-top body ideally prepared to respond to the driver's every intention.

SKYACTIV-G 2.0

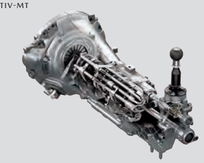


Max. power:
135kW/7,000rpm
Max. torque:
205Nm/4,000rpm

4-2-1 exhaust system

Lightweight, low-friction piston

SKYACTIV-MT



SKYACTIV-BODY

KINEMATIC POSTURE CONTROL (KPC)

Kinetic Posture Control (KPC) is a technology unique for the MX-5 that provides a more integrated and stable turning posture even when cornering at high speed, whilst utilizing the MX-5's suspension structure that works smoothly in everyday settings. The MX-5's rear suspension is designed to generate an "anti-lift" force that pulls the vehicle's body down when the brakes are applied. KPC takes full advantage of the characteristics of this suspension and applies a slight brake to the inner rear wheel when cornering under conditions with high G-force, thereby suppressing roll and pulling the vehicle down to stabilize posture. Moreover, KPC does not add even a single gram to the weight of the vehicle.
The performance of KPC is particularly noticeable on tight corners and rough road surfaces. Even in situations where the car body would tilt significantly in the past, KPC stabilizes the vehicle so that it grips to the road surface. This gives a greater sense of connection to the ground, and enables the driver to accelerate with greater confidence. Furthermore, as KPC prevents the body of the car from lifting when cornering at high-speed, it ensures a comfortable ride not only for the driver but also for passengers.
KPC can determine the turning conditions in real time from the difference in speed between the left and right rear wheels, and increases its activity linearly in response to this to produce an appropriate posture stabilization effect. In other words, there is no change in terms of everyday driving situations, where the MX-5 maintains the same relaxed and nimble behaviour, but the harder the drive becomes, the more the MX-5 sharpens its tail-end senses and cleverly adjusts its own turning posture. This enables a driving experience that maximizes the MX-5's innate potential in a wider range of driving scenarios than ever before.

ASYMMETRIC LIMITED SLIP DIFFERENTIAL (ASYMMETRIC LSD)

Manual-transmission models feature Mazda's newly developed Asymmetric Limited Slip Differential (Asymmetric LSD). This compact, lightweight and high-durability unit is engineered to improve stability through turns by varying the differential's lockup characteristics in response to changes in the vertical load on the individual rear wheels during acceleration and deceleration. The LSD's conical clutch system is now controlled by an asymmetric cam mechanism with different angles for deceleration and acceleration to optimize lockup. In particular, increasing slip-limit during deceleration gives greater stability when slowing into a curve, where reduced rear wheel load causes vehicle instability. Combining this variable slip-limiting with a preload optimized for MX-5's engine, suspension, and tyre characteristics results in smoother, more linear cornering performance for nimbler handling everywhere: around town, on winding roads and even on the race track.

DSC-TRACK

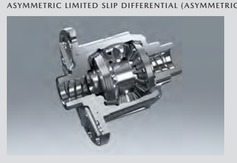
The Dynamic Stability Control (DSC) system on manual-transmission models now includes a DSC-TRACK mode to better support sports driving on circuits. In driver controllable under- or over-steer situations, DSC-TRACK remains inactive. If the system detects counter-steer as the car is about to enter an uncontrollable spin, DSC-TRACK intervenes with oversteer suppression to help regain control of the vehicle. However, there are limits to its capabilities, and DSC-TRACK is intended only as a driver support function to help avoid hazardous situations while enhancing MX-5's *Jinba-ittai* sports driving.

KINEMATIC POSTURE CONTROL (KPC)

With KPC

Without KPC

ASYMMETRIC LIMITED SLIP DIFFERENTIAL (ASYMMETRIC LSD)



KEEPING YOU FOCUSED AND IN THE PICTURE

All driving demands concentration. Sports driving even more so. And modern cars constantly supply you with information such as hazard warnings, communications functions and entertainment from an ever-increasing range of sources. The key is how the information is presented. That's why Mazda developed its unique Human-Machine Interface (HMI) design, and engineered the cockpit from the ground up to give you information in a way that lets you stay focused on the road and on safe driving.

THE LEADING EDGE OF HMI DESIGN

The amount of information presented to you when driving continues its increase. For example, i-Activsense detects traffic conditions around the vehicle and provides warnings, while Mazda Connect, Mazda's in-vehicle connectivity system, offers the latest Internet-connected services via your smartphone. So to present this rising tide of information without compromising safety, Mazda engineered the cockpit's HMI design to prevent confusion in decision-making, minimize driver eye movements, and reduce physical stress.

The cockpit itself is divided into two zones, one focused on driving and the other focused on infotainment, and each zone has information displays and controls according to its purpose.

Physically separating these interfaces promotes easier recognition and smoother operation. Frequently used operations are controlled by steering-wheel mounted switches without taking the hands off the steering wheel.

Information for Mazda Connect's audio and communication functions is displayed on an 8.8-inch centre display featuring graphics designed for instant legibility. Multi-stage operations of Mazda Connect are quickly and accurately controlled by a commander control located on the floor console where the driver's hand naturally falls.

MAZDA CONNECT, THE BENCHMARK IN-VEHICLE CONNECTIVITY SYSTEM

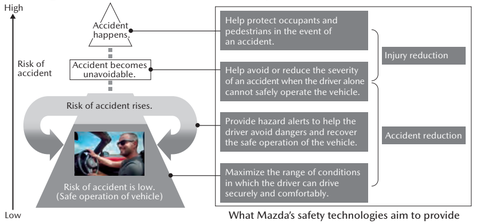
Internet connectivity has become an essential part of daily life, even while travelling in a car. So Mazda developed Mazda Connect to provide versatile connectivity while further enhancing safety. Mazda Connect offers a huge range of infotainment options from the Internet when connected to a smartphone. The system's Audio feature lets you access multiple audio sources including AM/FM radio, Internet radio, streaming audio services and mobile audio players, while the Communication feature provides the hand-free convenience of both making and receiving phone calls via voice commands.

Note: Available functions of Mazda Connect may vary according to the type of connected smartphone and its operating environment.

PERFORMANCE CAR, PERFORMANCE SAFETY

Mazda's safety philosophy, which guides the research and development of all our safety technologies, is based on understanding, respecting and trusting the driver. To drive more safely it's essential to recognize potential hazards, exercise good judgement and operate the car in an appropriate fashion. Mazda aims to support these essential functions so that drivers can drive securely and with peace of mind, despite changing driving conditions. Active safety measures include Mazda's i-Activsense suite of advanced safety technologies to help identify and assess potential hazards early on and reduce the risk of damage or injury. Passive safety features include a version of Mazda's high-strength Skyactiv-Body specifically designed for an FR open-top car.

Driving with Mazda Proactive Safety



What Mazda's safety technologies aim to provide

i-ACTIVSENSE

BLIND SPOT MONITORING (BSM) AND REAR CROSS TRAFFIC ALERT (RCTA)

BSM uses 24GHz quasi-milliwave radar sensors to help detect vehicles in the blind spots behind and to the side, and using a turn signal while BSM detects a vehicle triggers visual and audio warnings. RCTA uses the same sensors to alert the driver when it detects vehicles approaching from either side during reversing operations.

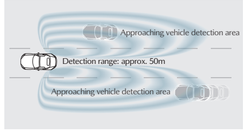
SMART BRAKE SUPPORT [REAR CROSSING] (SBS-RC)

Vehicles approaching from the left or right at the rear of the vehicle are another source of danger when reversing. SBS-RC detects vehicles approaching from the vehicle's left and right rear blind spots when reversing at speeds between approximately 0 and 15km/h. If the system judges an impact is unavoidable, it operates the brakes to help mitigate damage caused by the collision.

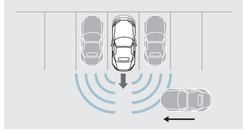
LANE DEPARTURE WARNING SYSTEM (LDWS)

LDWS senses lane markings on the road surface. When the system predicts departure from the lane it issues a beep or an audible warning similar to the noise a car makes when it runs onto a rumble strip to prompt timely steering corrections. The system assesses driver inputs such as use of the turn signals to weed out false alarms.

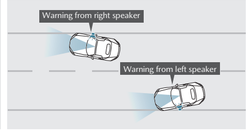
BLIND SPOT MONITORING (BSM) AND REAR CROSS TRAFFIC ALERT (RCTA)



SMART BRAKE SUPPORT [REAR CROSSING] (SBS-RC)



LANE DEPARTURE WARNING SYSTEM (LDWS)



Notes: i-Activsense safety features are not a substitute for safe and attentive driving. There are limitations to the range and detection of the systems. Availability of safety equipment/features varies according to country and model grade.

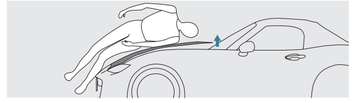
OTHER FEATURES

SRS AIRBAGS

All grades feature front airbags as standard equipment for both seats. Side airbags with a head-protecting cell help safeguard occupants' heads from injury inflicted by walls or poles in a collision, even when the top is down.

PEDESTRIAN PROTECTION

The Active Bonnet design releases the bonnet instantly whenever impact with a pedestrian is anticipated, to quickly secure a safety space between the bonnet and rigid parts in the engine compartment. At the same time, the bonnet's inner structure effectively absorbs impact energy.



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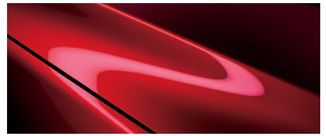
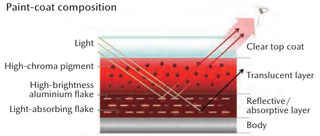
EXTERIOR AND INTERIOR COLOURS

BODY COLOURS



Soul Red Crystal Metallic (46V)

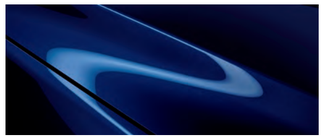
Machine Grey Metallic (46G)



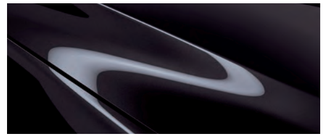
TAKUMI-NURI Mazda's unique painting technology Takumi-Nuri (*takumi*: master craftsman, *nuri*: painting), with its unprecedented combination of colour, highlights, shade and depth, further emphasizes the sheer beauty and quality of the dynamic body shape. The lineup includes two Takumi-Nuri body colours: Soul Red Crystal Metallic and Machine Grey Metallic.

Aero Grey Metallic (52C)

Zircon Sand Metallic (48T)



Deep Crystal Blue Mica (42M)



Jet Black Mica (41W)

Snowflake White Pearl Mica (25D)

SEAT MATERIALS

Nappa leather, Sports Tan

Leather, Black

COMFORT AND UTILITY

Four-lamp LED headlights have a watchful, eye-like design for a look of vitality and power waiting to be unleashed, underlined by newly designed daytime running lamps. The turn indicators are upgraded for greater visibility.

The iconic design of the U-shaped rear combination lamps and round tail lights pays tribute to the rear view of previous generations of the MX-5. The light-emitting area of the individual lamps is enlarged for better visibility, especially when braking.

Newly designed, lightweight 17-inch aluminium wheels feature black metallic paint on sharply designed spokes to emphasize their functional beauty and add to MX-5's bold, athletic stance.

The large analogue tachometer features a vertical zero position to underline the contrast between action and inaction. The face of the dial is jet black to enhance legibility and lower reflections of the surrounding environment during open-top driving.

The exclusive Bose premium sound system features nine speakers including a pair of speakers in both the driver's and passenger's headrests, to deliver superior sound quality even when driving with the top down.

Comprehensive airflow control measures minimize unpleasant draughts while guiding just a refreshing breeze to the occupant's arms and chest to assure the full pleasure of driving with the top down. A large, transparent aero board supports MX-5 RF's body rigidity while maintaining rearward visibility.

Despite the short rear overhang and the space dedicated to stowing the roof, the boot on both models is long and wide giving truly practical use. This versatile luggage compartment can easily accommodate a pair of hard-type carry-on bags, and MX-5 RF's boot even features a multipurpose box for tools and other items.

Compared to previous generations, the soft top is both lighter and more efficient at reducing noise and vibration. In addition, opening and closing the top while seated requires less effort, allowing carefree enjoyment of open-air driving.

The power retractable hardtop consists of front-, middle- and rear-roof sections and the rear window glass panel. When open, the rear roof remains on the body while the other parts are stowed in the space behind the seats. Opening/closing the roof is done by simply pressing the switch on the front console, even when MX-5 RF is in motion (at speeds up to 10km/h). The movements of each roof section are synchronized and overlapped to achieve smooth, fast operation. Operation is confirmed by a five-step animation shown in the multi-information display in the meter cluster.

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