



i-ACTIV AWD®

Mazda's i-Activ AWD® embodies the Jinba Ittai concept by anticipating the driver's intentions on the road. The system provides an intelligent response that predictive instead of reactive. This allows for spirited driving dynamics and smooth control on any dry pavement and in all weather conditions.



DRIVE CONNECTED - EXPLORING I-ACTIV AWD®



WHAT IS I-ACTIV AWD®?

By utilizing information from a wide range of sensors, i-Activ AWD® anticipates and prevents wheel slippage before it ever occurs. This is achieved by continually monitoring road conditions in real time to watch for tiny variations in wheel speed that a driver would never notice — allowing for spirited driving dynamics in any situation.



HOW DOES I-ACTIV AWD® WORK?

i-Activ AWD® uses information from other vehicle systems to analyze, calculate and manage torque distribution at a frequency of over 200 times per second. This enables secure take-off, sharp cornering and braking by reducing wheel-slip in all directions.



HOW DOES I-ACTIV AWD® PREDICT ROAD CONDITIONS?

i-Activ AWD® monitors several factors to predict road surface conditions including:

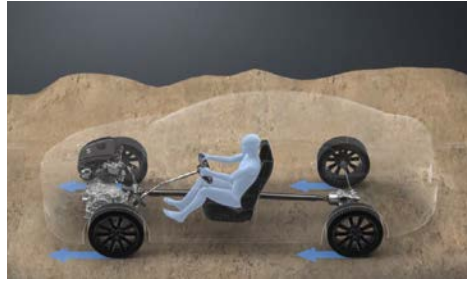
- External temperature gauge
- Steering angle and torque
- Brake fluid pressure
- Windshield wiper usage
- Wheel speed

DRIVE CONFIDENT - CUTTING EDGE TECHNOLOGY



FRONT WHEEL SLIP WARNING DETECTION

Uses the information from the vehicle's sensors to accurately calculate ground and front wheel speed. These calculations provide the ability to better detect the microscopic wheel slips that act as warning signs of potential tire spin on various road surfaces.



TORQUE CONTROL

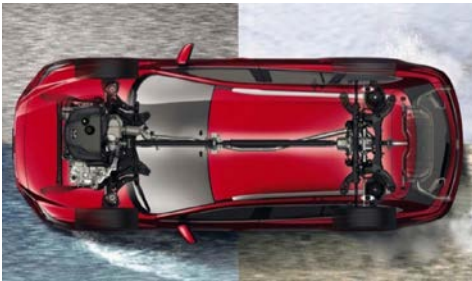
Utilizes a damper to ensure direct response and reduce Noise, Vibration and Harshness (NVH). This technology properly transfers torque from front to rear wheels in any situation. This enables torque to always be available at the rear axle if needed – allowing for instantaneous transition to all-wheel-drive mode when the command is received.



OFF-ROAD TRACTION ASSIST

When a diagonal wheel loses traction, the traction control system will stop reducing engine torque — and instead increase brake force on the wheels without traction. This transfers power to the wheels still on the ground and allows the vehicle to continue moving forward.

DRIVE YOUR WAY - BENEFITS OF I-ACTIV AWD®



BETTER EFFICIENCY

Mazda engineers were able to reduce mechanical and frictional losses with a lightweight, high-strength driveline, a smaller rear differential and the use of ultra-low viscosity oil. The result is a more efficient all-wheel-drive system with a fuel economy as good as a vehicle with front-wheel-drive.



BETTER REAL-WORLD DRIVABILITY

i-Activ AWD® is so efficient that it takes less than a mile per gallon difference between two-wheel-drive and all-wheel-drive – meaning there is almost no fuel economy penalty to carry the drive-line system in a vehicle. Plus, the i-Activ AWD® evolved technology provides enhanced traction for better stability and acceleration in poor weather, dry pavement and even off-roading conditions.