



Latest technology announcement

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Tetsuro Aikawa / Managing Director In Charge of Product Development Group Headquarters

Mitsubishi Motors started along its path of corporate revitalization raising the banner of a corporate philosophy that offers three values to society and our customers. These are: "Driving pleasure," "Reassuring Safety," and "Environmental Responsibility." Today, I will be introducing two technologies that will be incorporated in a new model to be launched this fall.



The first technology is Super-All Wheel Control, or S-AWC. And the second is Twin Clutch Sportronic Shift Transmission, or Twin Clutch SST.



I am confident that the new sports sedan, equipped with these two technologies, is one that we can be very proud of, as it delivers exhilarating handling that keeps it glued to the road, is in perfect harmony with the driver's feelings, and as it realizes super-slick shifting that gives split-second response to throttle inputs and fingertip operation of the shifters.

Seiichi Ota / Corporate General Manager of Development Engineering Office

I would like to take a look at the vehicle dynamics control technologies that Mitsubishi Motors has developed to date. It all began with the prototype of our All Wheel Control technology, the Active Four system fitted to the Galant VR-4, which was launched in 1987.



This technology was inherited by the Lancer Evolution, which showcases our most advanced vehicle dynamics control technology, and was later developed into a system that combined Active Center Differential (ACD) and Active Yaw Control (AYC) component systems in the Lancer Evolution VII that came to market in 2001.

Our automatic transmission electronic control technology started with the Tredia, launched in 1982. The next major advance in this field was the Sport Mode 6-speed CVT with paddle shifting, introduced on the Outlander and announced in 2005 (Japan spec Outlander), that delivered more active response and an exhilarating ride, allowing drivers of all abilities to enjoy and experience Mitsubishi's technological advancements.



We will continue to develop the Twin Clutch SST and S-AWC as they are two very dynamic technologies that symbolize Mitsubishi Motors—so watch this space for future advances!



Kaoru Sawase / Expert, Driveline Engineering Dept.

The S-AWC system is responsible for the integration and management of the ACD, AYC, ASC, and ABS component systems on the new high-performance sports sedan. ACD regulates front-/rear-wheel torque split; AYC regulates rear-wheel torque split and controls yaw; ASC regulates braking force and features both stability and traction control functions; while ABS prevents wheels from locking up under emergency braking. Now, I'd like to describe the evolutionary advances that S-AWC brings over its predecessor.

Among these are three major advances. First, as the diagram shows, is the integrated management of the individual ACD, AYD, ASC, and ABS component systems. Second is the introduction of yaw rate feedback control. And third is the addition of brake force control.



Takeo Kimura / Senior Expert, Drivetrain Engineering Dept.

I'd like to begin talking about the Twin Clutch SST automated manual transmission. We developed this transmission to embody two concepts: first, to realize super-quick shifting that allows drivers of all abilities to enjoy the car's performance in all situations; and second, to achieve excellent fuel consumption under all driving conditions. As you'll see when you drive it yourselves, this new transmission allows super-quick shifting in manual mode while at the same time delivering the jerk-free and leisurely shifting of a regular automatic transmission.

The transmission puts 1st, 3rd, and 5th gears and 2nd, 4th, and 6th gears on separate input shafts, each connected to its own clutch. Depending on vehicle speed and driving conditions, the synchronizers preselect the next gear on the shaft connected to the clutch that is not engaged, and then the shift is accomplished when engine torque is applied to that clutch.

The SST has a very simple operating mechanism and thus is not really dependent on individual driver skill. It's quite different from a manual transmission where your acceleration speed depends on how skilled you are at shifting gears. In other words, shift speed with the Twin Clutch SST varies very little from driver to driver, so the car will accelerate exactly as the driver expects it to.

The S-AWC system uses advanced cornering determining technology that allows it to make decisions as to whether or not it would be better to slow down for a particular curve. It actively communicates with the Twin Clutch SST and, after sensing the driver's intentions, it may decide that downshifting is not necessary to slow the vehicle. That's basically how it works.

