Safety

Motorcycle units in operation (UIOs) are increasing in India. Staff members of dealers in India were trained in Japan and are now engaging in traffic safety education as instructors.

Basic approach

Basic policy

Toward the realization of "a collision-free mobile society"

As exemplified by the remark of our founder Soichiro Honda that "as long as we are handling a mode of transportation, we're entrusted with human lives," on the basis of the concept of safe coexistence, Honda is aiming at "a collision-free mobile society" where our customers, and everyone sharing the road can safely and confidently enjoy the freedom of mobility.

Honda has a long history of engagement in safety initiatives, dating to the 1960s. Back then, in the period of development of motorization in Japan when there was not even a clear concept of "driving safety," Honda started driving safety promotion activities, the first of their kind for motorcycle/automobile manufacturers. Later, we developed various technologies including the driver-side SRS airbag, the world's first pedestrian dummies, and the Advanced Compatibility Engineering Body Structure that helps to protect occupants of both vehicles in a collision. In 2000, we built the world's first indoor, crash test facility, making it possible to conduct tests that better reflect real-world crash configurations.

Safety technologies developed in the manner described above have been aggressively applied to various products. As for pedestrian dummies, in order to enhance safety for the traffic society as a whole, their use is not limited to the development of Honda's products. They are leased to other companies and research institutions, widely contributing to the studies on pedestrian protection.

Honda is actively working on traffic safety, with an eye to the actual conditions of accidents that exist in each period and region.

Global Safety Slogan

Safety for Everyone

Honda dreams of a collision-free mobile society where our customers, and everyone sharing the road, can safely and confidently enjoy the freedom of mobility.

Direction of activities

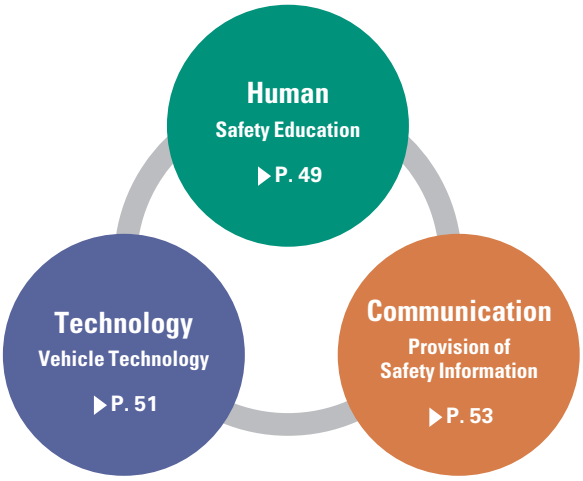
Effective safety promotion activities through the combination of 3 areas

Issues of traffic environment are diverse from region to region, such as traffic being too concentrated, or infrastructure needing to be developed to a sufficient degree. Against that background, Honda is effectively promoting activities in three areas, "Human (Safety Education)," "Technology (Vehicle Technology)," and "Communication (Provision of Safety Information)," by coordinating the three in accordance with the actual conditions of each region.

If we take Thailand for instance, traffic accidents involving motorcycles in particular have been increasing in recent years as a result of rapid development of motorization. Therefore, Honda first focused on the area of "Human (Safety Education)" that is highly effective under such conditions. In addition to Honda's customers, younger people who will become drivers/riders in the future are included in the scope. We are implementing our own program in accordance with how local people think of the traffic environment and traffic safety in Thailand, utilizing the know-how we have accumulated over many years.

In addition to these activities, in the area of "Technology (Vehicle Technology)," we have developed the "LaneWatch™" system that effectively prevents the driver from failing to notice a motorcycle in the blind spot when an automobile changes lanes.

3 areas of safety promotion activities



Human (Safety Education)

Honda's approach

Promotion of "human resource development," "provision of opportunities " and "development of software"

In 1970, Honda established the Driving Safety Promotion Center. Since then, through cooperation with Honda Traffic Education Centers*, motorcycle/automobile/power product dealers, local corporations and schools, we have provided traffic safety education and training for drivers and riders to a total of more than 9 million customers.

Our activities are based on "to pass on safety education from person to person," which focuses on people, and "to provide participatory hands-on education," which can let people experience hazards in a safe environment, and we have three pillars for our activities. The first pillar is "human resource development," which nurtures instructors who will be responsible for traffic safety education. The second one is the "provision of opportunities," which provides people with opportunities to think and learn about traffic safety. The third one is the "development of software," which develops educational programs and equipment to help increase learning effectiveness.

With regard to overseas activities, since we started driving safety promotion activities in Brazil in 1972, we have carried out activities in 37 countries in the world including Japan, establishing Traffic Education Centers in various countries and cooperating with local dealers. Of those countries, emerging countries in particular contain areas where regulations, traffic rules and road infrastructure are not yet ideal, despite the fact that motorization is rapidly progressing. An increase in fatal traffic accidents has become a social issue. Therefore, Honda is enhancing its activities while coordinating efforts with the applicable countries and the persons concerned in the local governments.

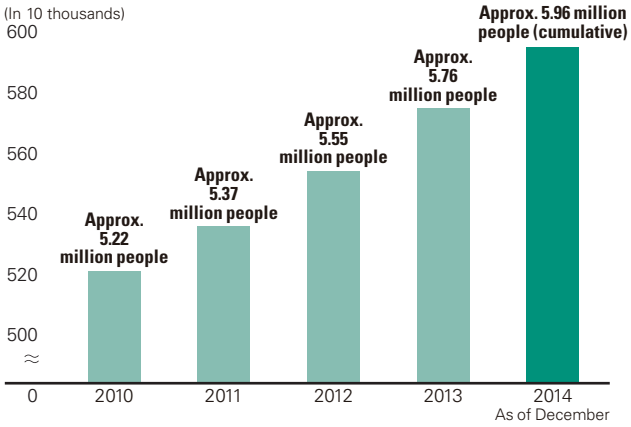
* Honda facilities where internal and external instructors on traffic safety are trained and driving safety education is provided to corporations, schools and individual customers

Review of activities in the fiscal year 2015

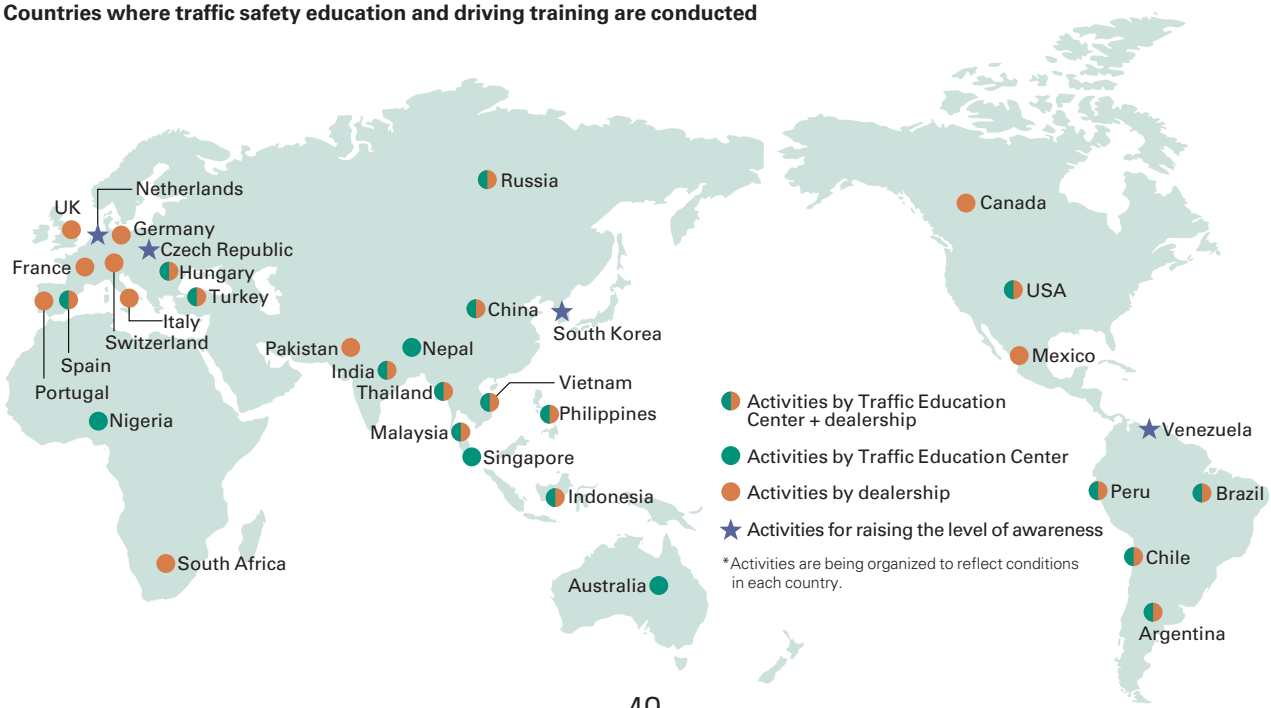
Implementation of driving safety promotion activities in various regions

As an initiative to provide our customers with the correct understanding of one of the latest safety technologies, we

Number of people participating in driving safety promotion activities in Japan (cumulative)



Countries where traffic safety education and driving training are conducted



held an event for test-driving a vehicle equipped with the "City-Brake Active System (CTBA)." This system has a function to prevent sudden acceleration in the case of the driver stepping on the gas pedal with an obstacle in front of the vehicle when the vehicle speed is 30km/h or less, in order to avoid/mitigate a collision with a vehicle in front.

In addition, we have developed the "Self-operated Vehicle Safe Driving Support Program," which supports the assessment and training for sufferers of higher brain dysfunction and others who are rehabilitating to return to normal life and drive again. Aside from the preparation of a structure that can offer classes at the Traffic Education Centers nationwide, an initiative for providing total support up to the return to driving through cooperation with local driving schools and medical institutions started and is still expanding now. Furthermore, based on an increasing need for the service to drive people that require care and assistance as the society continuous to age, we have also developed the "Safety Training Program for Drivers with Disabled Passengers" for service providers.

As for overseas cooperation, to increase the number of instructors who will conduct safety promotion activities at the dealers in India where motorcycle units in operation (UIOs) and accidents are increasing, we have implemented the training for instructors from India at Traffic Education Centers in Japan.

TOPICS Promotion of a "One Dealer One School" program that teaches riding safety to young motorcyclists in Thailand

In Thailand where motorization got underway ahead of other ASEAN countries, the use of cars is rapidly spreading following the explosive popularization of motorcycles. In addition, motorcycle taxis with passengers onboard are very common, and frequent occurrence of traffic congestion and traffic accidents has become a serious social issue in urban areas.

Against this background, A. P. Honda Co., Ltd. (A. P. Honda), which is a motorcycle sales company established in Thailand in 1986, launched its riding safety program in 1989 and has been carrying out various activities such as hands-on training for riders and traffic safety education and awareness-raising activities for local residents while closely coordinating efforts with local governments. At the same time, the company is fulfilling a role as a pioneer in the area of traffic safety education in this country by cooperating with police authorities for crash surveys and providing support for the traffic divisions of the police to hold motorcycle workshops. We also urge administrative agencies to improve the relevant legal system including mandatory helmet use and the establishment of a pre-licensing training system.

"Safe Riding Skills Contest" that is held at the training center as part of the "One Dealer One School" program

One of the activities on which the above-mentioned A. P. Honda is concentrating its efforts in recent years is the "One Dealer One School" program that was launched in 2011. In this program, each dealership supports one provincial vocational school by providing education and training on riding safety. The students that go to vocational schools are between 15 and 19 years of age, the typical age to start riding motorcycles. It is also the age range that suffers the most fatal crashes. Statistics also show that motorcycle crash rates are highest in rural areas where improvement or upgrading of roads happens more slowly than in urban areas. Therefore, A. P. Honda proposed to the Ministry of Education to start the program for students of local vocational schools to learn traffic safety and how to ride motorcycles safely through the utilization of the dealers nationwide. The program is currently implemented at all 314 vocational schools with automotive departments.

Message from A. P. Honda representative

A. P. Honda started an initiative to build training centers alongside the dealerships, and 9 centers nationwide are currently serving as the hubs of local riding safety education. In addition, we have provided automotive departments of vocational schools with motorcycles as teaching materials and dispatched technical instructors. Dealerships also hire some graduates of vocational schools, so the initiatives implemented so far have led to a relationship of trust.

Technology (Vehicle Technology)

Honda's approach

Development of advanced safety technologies with an eye to the realization of automated driving systems

Honda has been engaging in the development of safety technologies by attaching great importance to the actual traffic environment where diverse types of mobility intermingle and to the actual accidents in the real world, always setting lofty targets that easily meet regulations, and assuming a stance of "if there isn't one, make it."

We have been developing and commercializing safety technologies in succession. In 1998, Honda developed world first pedestrian dummies, and we built the world's first indoor, all-weather omni-directional crash test facility in 2000. In 2003, we developed the crash-compatibility body and the world's first Collision Mitigation Brake System (CMBS).

In 2014, we announced "Honda SENSING/AcuraWatch," a new advanced driver-assistive safety system. "Honda SENSING/AcuraWatch" is a general term for advanced safety technologies that will lead to automated driving technologies in the future, which assists the driver from normal driving to accident avoidance based on the information on the surroundings of the vehicle, through the use of sensors and other elements.

Honda will continue to proceed steadily with the development of technologies going forward as indicated in the roadmap for safety technologies for automobiles (see the diagram below), with an aim to realize "a collision-free society" where our customers, and everyone sharing the road, can enjoy their lives with peace of mind.

Review of activities in the fiscal year 2015

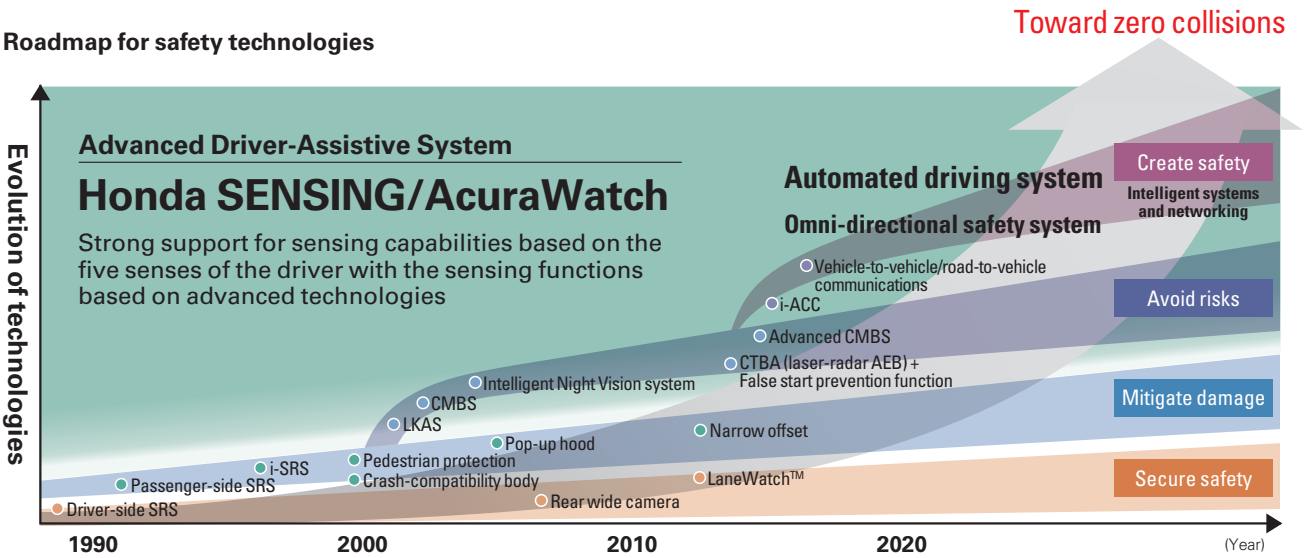
Application of advanced driver-assistive safety technologies to various models

"Honda SENSING/AcuraWatch" was installed in Japan in a minivan Odyssey launched in January 2015 and in a February launch minivan Jade and a sedan Legend. In the U.S., it was installed in a sedan Acura TLX launched in August 2014 and an SUV CR-V launched in September of the same year. In Europe in February 2015, it was installed in CR-V.*1 Technologies that make up "Honda SENSING/AcuraWatch" include the world's first "Pedestrian Collision Mitigation Steering System" that detects pedestrians and adjusts the steering, and Road Departure Mitigation (RDM) System that adjusts the steering if the vehicle is likely to stray from a detected lane.

At the 21st "ITS*2 World Congress" held in Detroit, Michigan in the U.S. in September 2014, Honda demonstrated the latest connected-car technology (car technology based on Internet connection) and automated driving technologies.

*1: Technologies that are actually applied may vary depending on the models to which "Honda SENSING/AcuraWatch" is introduced.
*2: Intelligent Transport System.

Roadmap for safety technologies



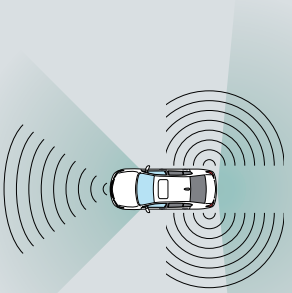
TOPICS Honda SENSING/AcuraWatch
High-precision detection capability to support safe driving

Based on the findings that many of the traffic accidents involving automobiles are collisions with pedestrians and collisions with oncoming vehicles due to departure from the lane, Honda has built a system capable of high-precision recognition by combining two types of sensors with different characteristics, the millimeter-wave radar and the monocular camera. We also added new functions such as the world's first "Pedestrian Collision Mitigation Steering System."

Front-end safety

Avoidance assistance
- Collision Mitigation Brake System (CMBS)
- Collision Mitigation Throttle Control
- Road Departure Mitigation (RDM)
- Pedestrian Collision Mitigation Steering System

Active safety (prevention of crashes)
- Adaptive Cruise Control (ACC) with Low-Speed Follow
- LKAS (Lane Keep Assist System)
- Lead Car Departure Notification System
- Traffic Sign Recognition System



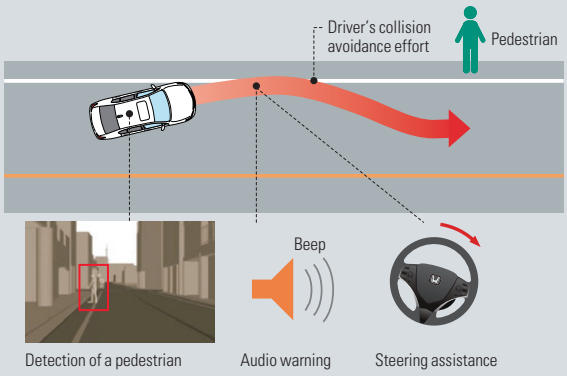
Lateral safety
- Blind Spot Information System
- LaneWatch™

Rear-end safety
- Multi-view Camera System
- Wide-angle Rearview Camera System
- Parking Sensor System
- Cross Traffic Monitor

The world's first Pedestrian Collision Mitigation Steering System*

The millimeter-wave radar and monocular camera detect pedestrians and boundary line on the side strip of the road. When the system forecasts a collision with a pedestrian as a result of the vehicle straying from the lane toward the side strip, it provides audio and visual warnings and turns the steering wheel toward the other direction to facilitate the driver's collision avoidance effort.

* The system is not applied to some models.



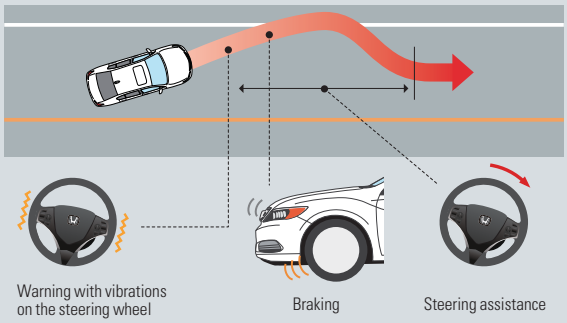
Message from the engineers

We established a technology that can provide assistance for avoidance by steering in case of emergency even under complicated circumstances like an urban area, through high-precision detection of lanes and pedestrians on the basis of integration of information recognized by radar and camera. A traffic accident puts whoever caused the accident as well as its victim(s) in tough situations. We developed this technology out of our desire to help prevent such heartbreaking traffic accidents.

Japan's first Road Departure Mitigation (RDM)

The monocular camera detects the lane boundaries, and if the vehicle is likely to stray from a detected lane, the system will give a visual warning on the display and vibrations on the steering wheel. In addition, the system will apply corrective steering input to bring the vehicle back in the lane. When the system forecasts that the vehicle is straying too far off, the system will apply braking force to prevent the vehicle from driving off the road.

* The system may not be able to effectively control the vehicle, depending on the driving and road conditions.



Message from the engineers

While a warning for the departure of vehicle from the road can draw a driver's attention most effectively if it can be issued as soon as possible, a too-frequent warning distracts the driver. Therefore, we realized a function that can effectively reduce accidents without distracting the drivers by actuating the function only when insufficient response with regard to driving operation is detected.

Communication (Provision of Safety Information)

Honda's approach

Providing wide-ranging risk prevention information through a telematics service

In 1998, Honda started to offer "Internavi," which is a car navigation system equipped with communication functions, and provides information on traffic congestion through the use of driving data gathered from Honda vehicles. In addition to the usefulness mentioned above, Honda started to offer weather information in 2004 and disaster information in 2007. By utilizing the telematics service that integrated communication and information, we have started to provide drivers with information that will help them drive more safely and comfortably.

One form of evolution from the above activities is the "Safety Map" in Japan. Emergency braking applied by cars, information on traffic accidents provided by the police and local governments, traffic information provided by local residents, and other relevant information is integrated and analyzed to generate maps, which tell people including residents and drivers in advance about places on the road that require special caution. We are pleased to note that many people are utilizing the maps.

In addition, we are currently focusing on building a system that will provide information on traffic conditions in surrounding areas and traffic accident risks on a real-time basis, through the integration of technologies of "Honda SENSING/AcuraWatch" with the telematics service and the connection with other vehicles equipped with sensors or GPS, and people in surrounding areas who are carrying smartphones, via wireless communication such as Wi-Fi. We are striving to realize "a collision-free mobile society" where everyone sharing the road can drive or walk with peace of mind.

Review of activities in the fiscal year 2015

Expansion of the scope of utilization/application of safety information

In January 2014, to protect drivers from whiteouts that severely reduce visibility due to blizzards and other weather conditions, Honda started to distribute information that forecasts whiteouts in Hokkaido. In December 2014, we extended this initiative to 10 other prefectures (Aomori, Iwate, Miyagi, Akita, Yamagata, Fukushima, Tochigi, Gunma and portions of Niigata and Nagano), and conducted a demonstration testing.

In December 2014, as an initiative to enhance the safety of the mobility society through the cooperation of public and private sectors, Honda participated in a demonstration test for a project that provides travelers with disaster information, which was implemented by the Ministry of Land, Infrastructure, Transport and Tourism (MLIT). This is a project that provides useful information for evacuation according to the current location at the time of disasters, including tsunami and heavy rain, to people unfamiliar with the local geography, such as traveling drivers, through car navigation systems, smartphone applications, etc., The project test verifies the effectiveness for disaster damage mitigation.

In addition, in FY2015, traffic accident information newly provided by 9 prefectural police headquarters was reflected in the nationwide "Safety Map," which was made publicly available in September 2013.

* It is a project adopted by MLIT as a demonstration project enterprise for G-space City Construction for FY2015. The council for providing travelers with disaster information was held in Shizuoka Prefecture, which consists of Mizuho Information & Research Institute, Inc., Shizuoka Prefecture, Hyogo Earthquake Memorial 21st Century Research Institute (public interest incorporated foundation) and ITS Japan (specified non-profit corporation).

Example of weather forecast information

In a whiteout, cars may become unable to run because of sudden snowdrifts obstructing exhaust pipes and occupants may perish due to CO poisoning or engine stalls leading to freezingTherefore, Honda provides a service that displays how poor the visibility is and the distance from an encounter on the Internavi or smartphone application and also alerts drivers with the use of sound, when the forecast is to encounter a blizzard within a 30-km range from the driving route.

Example of a traffic safety measure using the Safety Map

Honda has signed an agreement with Saitama Prefecture regarding the provision of road traffic data. Based on this agreement, Saitama Prefecture is continuously implementing traffic safety measures including the addition of road marking by fusing the Safety Map with on road traffic data within the prefecture.

Third-party evaluation regarding safety

Many of Honda's models have received high safety assessments from NCAPs*1 in various regions. In Japan, 4 models also received "ASV"*2, and 1 model received "ASV+":2, which is the highest rank, in the J-NCAP's preventive safety assessment. In the United States, multiple models received "TSP" or "TSP+" in the safety performance assessment by IIHS*3 (Insurance Institute for Highway Safety) as the cars that excel in safety.

*1: NCAP: New Car Assessment Program: It is a program that tests and evaluates the safety performance of cars, which is performed by public organizations in various regions. Testing and evaluation methods are different for each region. Ratings range from 0★ to 5★ (5★+ is the highest rating in some regions).
*2: ASV (ASV+): It stands for Advanced Safety Vehicle. Advanced safety performance, which includes the technology for automatic braking when a collision is not avoidable, is tested and evaluated. Two levels of ASV and ASV+ are used to assess the vehicles.
*3: IIHS: Insurance Institute for Highway Safety: It conducts the car assessment that tests and evaluates the safety performance of various cars. It only awards TSP and TSP+ to the cars that achieved excellent test results. TSP stands for Top Safety Pick.

Major third-party evaluation programs

Country	Third-party evaluation		Model
Japan	JNCAP	5★	VEZEL*4 / Accord HYBRID*4 / N-WGN*4 / FIT*4 / CR-V*4
	ASV+		ODYSSEY*4
	ASV		FIT*4 / VEZEL*4 / N-BOX*4 / N-WGN*4
Europe	Euro NCAP	5★	CR-V*5 / CIVIC*6 / CR-Z*7 / JAZZ*8 / Accord *8
China	C-NCAP	5★+	Accord*8
		5★	FIT*4 / Accord*4 / JADE*4 / CR-V*6 / ELYSION*6 / CRIDER*6 / CIVIC*8 / FIT*8 / ODYSSEY*8 / SPIRIOR*8
South Korea	KNCAP	5★	Accord*8 / CR-V*9
US	NCAP	5★	Accord 4door*4 / Accord 2door*4 / Accord HYBRID*4 / CIVIC 4door*4 / CIVIC HYBRID*4 / FIT*4 / ODYSSEY*4 / Acura ILX*4 / Acura MDX*4 / Acura RDX*4
	IIHS	TSP+	Acura TLX*4 / Acura RLX*4 / Acura MDX*4 / CR-V*4
		TSP	FIT*4 /CIVIC 2door*4 / CIVIC 4door*4 / Accord 2door*4 / Accord 4door*4 / ODYSSEY*4 / Acura TL*4
Australia	ANCAP	5★	CITY*4 / Accord*4 / ODYSSEY*4 / JAZZ*4
Southeast Asia	ASEAN NCAP	AOP5★*10	CITY*6 / CIVIC*6 / CR-V*6 / JAZZ*6

*4: Assessment in 2014 *5: Assessment in 2013 *6: Assessment in 2012 *7: Assessment in 2010 *8: Assessment in 2009 *9: Assessment in 2008
*10: Protective performance for occupants (adults)

TOPICS N-WGN (N Wagon" became the first mini-vehicle to receive the Five Star Award

A mini-vehicle N-WGN released in Japan in November 2013 pursued high safety performance through Honda's unique collision safety technology "G-CON" that utilizes a body structure which mitigates the damage to not just the occupants of the vehicle but also the other vehicle(s) and pedestrians. These technologies received high marks, and in the new overall evaluation for vehicle safety by JNCAP for FY 2014, N-WGN became the first mini-vehicle to earn the "Five Star Award," the program's highest rating.*

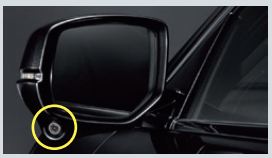

N-WGN


Logo for the Five Star Award received in the new overall evaluation for vehicle safety

* 1st as a mini-vehicle after FY 2012, when the new assessment criteria was introduced

TOPICS "LaneWatch™" received the Safety Technology Award

At the first ASEAN NCAP Grand Prix Awards held in Malaysia in September 2014, the safety of "LaneWatch™" received high marks and won the "Safety Technology Award." "LaneWatch™" is a system that supplements the blind spots of door mirrors with the view from a camera and assists the driver's safety check by displaying the following vehicles on the navigation screen.


Camera installed in the door mirror on the passenger side


Display on the navigation screen