

DENSO SPARK PLUG with ME

DENSO SPARK PLUGS take active supporting roles in all sorts of scenes. We interviewed some major motor sports figures whom DENSO supports and asked them why they selected DENSO.

F1

TMG Engineering Coordination, Director

Akitoshi Arai

Technological developments make advances every day. This is the world of F1, aptly named "the driving laboratory."

With a high level of perfection, the completion of an F1 car is accomplished with total reliance upon all the people and manufacturers engaged in its development

F1 is called the world's greatest automobile racing. Of course, as its technology significantly evolves, performance also is ever evolving. It is no exaggeration to state that F1 cars are the crowning achievement of leading-edge engineering and materials.

In recent F1 grand prix racing, various regulations change every season over a broad range of aspects including the engine, chassis, and tires. In these circumstances of F1 racing, first place in a race cannot be won only by a driver's technique anymore, not to mention the F1 championship title. I think that first place can become a reality only when all the various sections of teams, technologies, and suppliers, function in a balanced manner. In that sense, the TOYOTA F1 Team has been racing in an ideal environment because they can develop F1 cars with all the technologies integrated, including manufacturing all the parts of an engine and the chassis in one location, and performing aerodynamic experiments. Engineers from each section meet face-to-face every day, and can hold discussions while using the actual chassis and engine. This provides a big advantage for accelerating development.

I am responsible as the director of technology coordination of this team, and to communicate with TMG in Germany, the Toyota Higashi-Fuji Technical Center, and with each supplier, in order to make strides within the entire F1 Project. I am very satisfied with the development capabilities of DENSO and other suppliers, and very much appreciate their cooperative structures, too. Development of F1 cars can never really be said to be complete, because it is evolving every day by injections of cutting-edge tech-

nology. Such development efforts produce results with manufacturing skills that drivers can rely on and to which they entrust their lives, and with the reliability of the manufacturers and people involved in the development. I believe this relationship of trust improves the completeness of cars and brings good results.

Not only F1 cars, but also excellent things are built from the accumulation of effort

An F1 engine turns at a maximum 19,000 rpm, which is approximately two times faster than passenger cars, and generates more than 700 horsepower. It is not difficult to imagine that an F1 car engine is subject to extremely tough conditions since it must maintain such a high rpm rate all through a race. In the past few years, the parts that electronically control functions have been regulated and improvement of drivability is required more than ever. That means it is becoming more important to develop an engine while seeking speed, durability, and driver-friendliness. For that reason, each and every part of the engine is required to have extreme precision and reliability. Needless to say, the relationship of trust with suppliers is very important. DENSO provides us with alternators and oil coolers, and develops radiators together with us from the primary steps of development. Moreover, with regard to spark plugs, our team has been racing with DENSO's F1 SPARK PLUGS since our entry into the world of F1 in 2002. This is because we can realize high performance with DENSO SPARK PLUGS under the most severe use conditions without any trouble.

Although the spark plugs are very small parts in size, their performance and reliability are realized and based on the accumulation of daily efforts made by many researchers, engineers, and operators at manufacturing sites. This is exactly the same as the development of an F1 car.

I find DENSO applying technologies cultivated from F1 racing to their various products, and feel that both companies receive benefits from our F1 Project. The DENSO IRIIDIUM PLUG that realized ignition performance and durability of F1 racing is representative of products that have been created from such a philosophy. This is why F1 grand prix racing is "the driving laboratory."



Akitoshi Arai

Joined Toyota as a chassis design engineer in 1979. Transferred to Brussels in 1987 with Toyota's expansion in the European market. Transferred to the Motor Sports Division of Toyota Higashi-Fuji Technical Center in 1990 and engaged in development of the TS010 for racing. Participated in 24 Heures du Mans with the TS010 in 1992 and 1993. Particularly, in 1993, Eddie Irvine recorded the fastest lap in the TS010. Joined in development of the initial Supra GT in 1994. Engaged in development of commercial passenger cars. Returned to the Motor Sports Division in 2002 and joined the F1 Project. Transferred to TMG as senior executive coordinator of the Chassis Division in 2004. Assigned as director of technology coordination in 2006.