

Toyota to Start Sales of Fuel Cell Buses under the Toyota Brand from Early 2017

Toyota City, Japan, October 20, 2016—Toyota Motor Corporation will begin to sell fuel cell buses (FC buses) under the Toyota brand from early 2017. Having already undergone repeated field tests for practical use, the Bureau of Transportation of the Tokyo Metropolitan Government plans to utilize two of these FC buses (model name: Toyota FC Bus) as fixed-route buses.

Toyota plans to introduce over 100 FC buses mainly in the Tokyo area, ahead of the Tokyo 2020 Olympic and Paralympic Games. In view of this, the FC buses will be sold for the first time in Japan in early 2017, so as to help increase the level of understanding by the general public of the utilization of FC buses as a form of public transportation.



Toyota FC Bus

Moreover, in preparation for the Tokyo 2020 Olympic and Paralympic Games, the number of FC buses being introduced will increase steadily going forward. Together with this, Toyota aims to engage continuously in the diligent development targeted at the expansion of the introduction of the new FC buses from 2018 so as to contribute to the realization of a hydrogen-based society.

The Toyota FC Bus was developed by Toyota, based on the company's experience in developing FC buses together with Hino Motors, Ltd. (Hino). The Toyota Fuel Cell System (TFCS)¹, which was developed for the Mirai fuel cell vehicle (FCV), has been adopted to provide better energy efficiency in comparison with internal combustion engines, as well as to deliver superior environmental performance with no CO₂ emissions or substances of concern (SOCs) when driving.

The bus also uses a high-capacity external power supply system. With a power supply capable of a 9 kW² maximum output, and a large capacity of electricity supply at 235 kWh³, the FC bus can be used as a power source in the event of disasters, such as at evacuation sites such as in school gymnasiums⁴ or, its electricity supply can also be harnessed for home electric appliance use.

The Toyota Group considers the use of hydrogen to be a powerful source of energy for the future. Toyota has released the Mirai FCV, while also engaging in the technological and product development of FC buses, fuel cell forklifts, as well as stationary fuel cells for use in homes. Going forward, the group will accelerate developments in a unified manner, so as to contribute to the realization of a hydrogen-based society.

Main specifications of the Toyota FC Bus

Vehicle	Length / width / height	10,525 / 2,490 / 3,340 mm
	Capacity (seated, standing, and driver)	77 (26+50+1)
FC stack	Name	Toyota FC stack
	Type	Solid polymer electrolyte
	Maximum output	114 kW × 2 units (155 PS × 2 units)
Motor	Type	AC synchronous
	Maximum output	113 kW × 2 units (154 PS × 2 units)
	Maximum torque	335 N-m× 2 (34.2 kgf-m× 2)
High-pressure hydrogen tank	Number of tanks	10
	Nominal working pressure	70 MPa (approx. 700 bar)
	Tank storage density	5.7 wt%
	Tank internal volume	600 liters
Drive battery	Type	Nickel-metal hydride
High-capacity external power supply system	Maximum output	9 kW
	Power supply amount	235 kWh

¹A system combining hybrid technology with fuel cell technology composed of Toyota FC stacks and high pressure hydrogen tanks etc.

²Possible electric power varies depending on the performance of the power supply unit.

³After DC/AC conversion by power supply unit. Power supply capacity varies according to power supply unit conversion efficiency, amount of remaining hydrogen and power consumption.

⁴Requires wiring work at the facilities.