

MEDIA INFORMATION

INFINITI PERFORMANCE HYBRID OVERVIEW

Some years before hybrid technology was introduced to Formula One™ as a power-booster for the power unit's internal combustion engine, INFINITI confidently declared their intent to be a leader in premium high performance hybrid research and manufacturing, in 2011, with a ground-breaking entry in the Guinness World Records.

At the Santa Pod drag strip in the United Kingdom, the INFINITI M35h, now known as the Q70 Hybrid, covered the 400m (quarter-mile) drag strip in just 13.9 seconds from a standing start.

Witnessed by a representative from the Guinness World Records, the spacious four-door, five-seat, luxury performance sedan recorded a computer-measured time more typical of a pure-bred sports car.

Sprinting to 60 mph in just 5.1 seconds and crossing the finish line at speeds in excess of 160 km/h (100 mph), the Q70 Hybrid became the world's fastest accelerating full-hybrid car.

This gasoline / electric vehicle utilized state-of-the-art performance-focused hybrid technology to secure its place in history, combining a V6 internal combustion engine with a 50 kW electric motor to produce a total of 360 horsepower, while achieving 145 g/km of CO₂ emissions.

The engineering brain behind the brawn is INFINITI's Direct Response Hybrid® technology, and it is the same advanced concept underpinning INFINITI high performance hybrid models today.

Recognized engineering excellence

Soon after becoming the world's fastest accelerating full-hybrid car, the high-tech heart within the Q70 Hybrid was honored as the sole hybrid powertrain noted by WardsAuto.com and WardsAuto World magazine in their 2012 "10 Best Engines" list.



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The prestigious list, of no more than 10, compiled annually by the editors of WardsAuto for over two decades, an international automotive industry publication itself over 80-years old, recognizes the elite from a comprehensive collection of international nominees.

During the testing process, the WardsAuto editors commented that "the M35h (Q70 Hybrid) trumps German luxury hybrid sedans that cost much more", and that the INFINITI luxury hybrid sedan was a "spectacular technological achievement".

Q50 Hybrid: quicker still

Setting high performance world records is one thing, but beating them is yet another achievement.

The next INFINITI model to utilize the Direct Response Hybrid® system was the Q50 Hybrid; launched in 2014. INFINITI's all-new four-door sports sedan promised performance delivered with refinement, a luxurious interior space, and the latest driver-focused technology. A fitting next destination for INFINITI's potent, modern powertrain, and the Q50 Hybrid maximized the powertrain's potential.

Where the Q70 Hybrid covered the quarter-mile in 13.9 seconds, the Q50 Hybrid trimmed that time by three-tenths of a second, to 13.6 seconds. The Q50 Hybrid also lowered the 0 - 60 mph sprint time to just 4.9 seconds.

These impressive performance statistics can only be achieved with the Direct Response Hybrid® system adding 67 hp and 214 lb-ft (290 Nm) of torque to the 3.5-liter V6 engine's output, for a full-blooded 360 hp and 472 lb-ft (640 Nm) of torque. It is this abundant torque figure that gives the INFINITI Q50 and Q70 performance hybrid models their acceleration speed and quick throttle response, and always-on-tap driver pleasure.

"From the outset we sought to develop a hybrid powertrain that would enhance driving dynamics and excitement, and deliver refined performance. That is our performance philosophy. Our focus has never been on fuel efficiency", says Francois Bancon, INFINITI Vice President Product Strategy.

"In the future we see our INFINITI Direct Response Hybrid® hybridized engineering as a pillar of the INFINITI range - always with an exhilarating driving experience as the ultimate goal."



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Hybrid in Formula One™ and the Renault Sport Formula One™ Team

The 2014 Formula One™ season, through new regulations, saw the introduction of 1.6-liter V6 engines, greatly enhanced by powerful electric hybrid systems. These hybrid power units make more horsepower (and considerably greater amounts of usable torque in the lower rev range) and use less fuel than the 2.4-liter V8 gasoline-only racing engines they replaced.

INFINITI applied this forward-looking technology to its road cars in 2011; using electric energy to replace engine capacity, and so too now the new crop of hybrid Formula One™ power units develop more power from smaller engine capacities. Now more than ever there is a relevant technology crossover between the automotive industry and Formula One™.

Much like a Formula One™ car, the INFINITI Direct Response Hybrid® harvests energy during braking – energy that would normally be wasted – and replenishes a unique fast charge / discharge lithium-ion battery. Then, when the driver demands maximum acceleration the battery powers a 50 kW electric motor housed within the 7-speed, twin-clutch automatic transmission and produces a wave of instant torque.

The performance hybrid system complements INFINITI's existing internal combustion engine with instant electric torque. Formula One™ drivers have noted the impressive acceleration torque of the current capacity-downsized hybrid powertrains, and INFINITI Direct Response Hybrid® drivers will also enjoy breath-taking acceleration and performance.

With the establishment of the Renault Sport Formula One™ Team, INFINITI becomes a technical partner of the team, co-developing the Power Unit's Energy Recovery System (ERS), which incorporates two motor generator units and a battery.

"After five years as a sponsor in Formula One™, INFINITI makes the daring move to co-develop one of the most sophisticated technologies in motorsport, making further synergies within the Renault-Nissan Alliance", says Tommaso Volpe, INFINITI Global Director Motorsport.

"INFINITI will leverage its expertise in performance hybrids and contribute engineering resources to the Renault Sport R.E.16 Power Unit, starting from the 2016 Formula One™ season."

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About INFINITI:

INFINITI Motor Company Ltd. is headquartered in Hong Kong with sales operations in over 50 countries. The INFINITI brand was launched in 1989. Its range of premium automobiles is currently built in manufacturing facilities in Japan, the United States, United Kingdom and China. INFINITI plans to also expand manufacturing into Mexico by 2017.

INFINITI design studios are located in Atsugi-Shi, near Yokohama, London, San Diego and Beijing. INFINITI is in the middle of a major product offensive. The brand has been widely acclaimed for its iconic design and innovative driver-assistance technologies.

More information about INFINITI and its industry leading technologies can be found at www.INFINITI.com. You can also follow us on Facebook, Twitter, LinkedIn and see all our latest videos on YouTube.



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