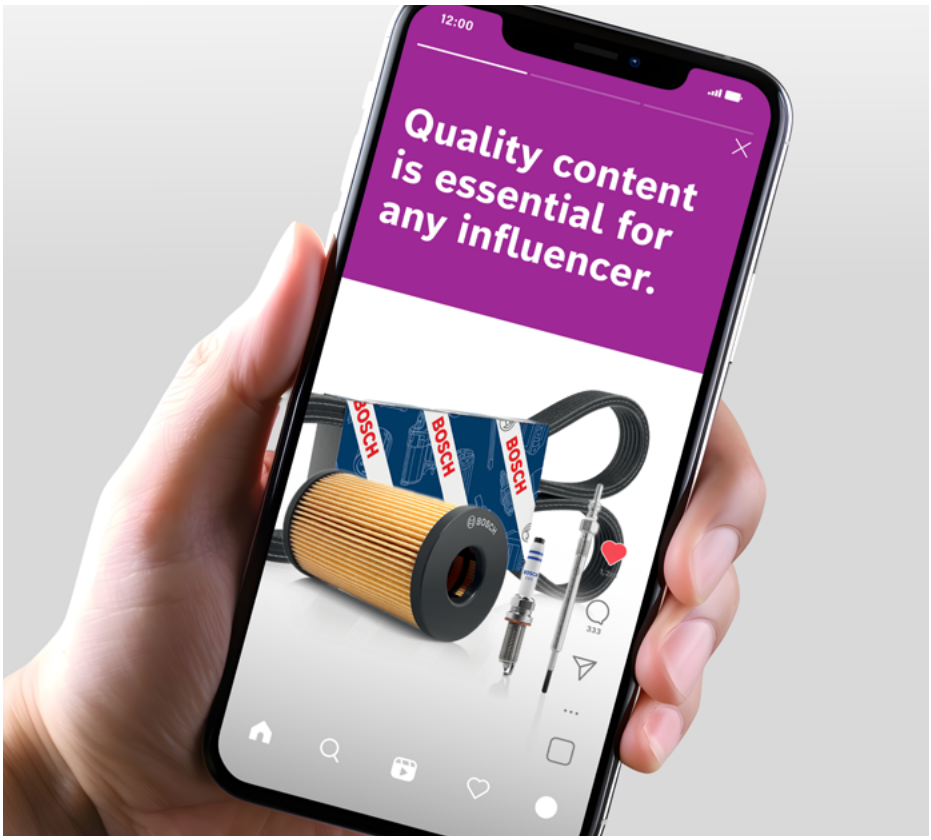
Automotive Insiders: Bosch glow plugs – the diesel engine's best friend



In a world of 'influencers' – people who use social media to appear as if they're knowledgeable on a certain subject – Bosch are the real deal. We're genuine automotive influencers because our in-depth automotive knowledge has been built over 100 years, our innovations have changed the automotive landscape, and our products and services are trusted by millions of customers around the world today.

In our new Automotive Insider series, we find out more about Bosch's best-known products, by talking to the people behind them. From high-performance wiper blades to bulbs and brakes, our experts lift the bonnet to share how these parts work – their history, how they've developed over the years, and how they're equipping vehicle mechanics and owners to face the future with confidence.

Today we're talking to Selina Trick – an expert behind Bosch glow plugs.

Can you tell a little about the history of Bosch glow plugs?

1922 saw the release of Bosch's first glow plug with mica insulator for commercial vehicles. Innovations came thick and fast after that, which meant a drastic reduction in glow wire plug heating time, from under 180 seconds in 1932, to under 15 seconds in 1958. By 2006, the DuraSpeed model could preheat in under 2 seconds. Today's glow plugs now cover 94% of diesel vehicle market in Europe, with a portfolio of 365 products and three different technologies used.

Modern glow plugs don't simply work as starting aids. Innovative diesel engines feature a lower compression, which means the diesel/air mixture does not ignite itself anymore in case of a cold engine. To address this, a post-glow system is needed, one that stays active even if the engine is already running, for example when the driver is stopping and starting the vehicle in a line of traffic.

What's the technology behind today's glow plugs?

Bosch's glow plug portfolio covers three different technologies – Duraterm, Duraterm HighSpeed and DuraSpeed. It's worth noting that the original equipment manufacturer decides which glow plug is installed in the vehicle

"Influencers love a plug. That's why we've been making them for over 100 years."

Is there any technology in particular you'd like to mention?

One particularly beneficial design feature of the glow plug is how it assists with regeneration of the diesel particle filter (DPF). These filters separate diesel removes the soot from exhaust gases. To prevent the DPF from clogging, which would cause excessive exhaust back pressure, the filtered soot particles are burned off of the filter regularly, in a process called regeneration. The intermediate glow function of Duraterm HighSpeed and DuraSpeed glow plugs help this regeneration process, by increasing exhaust temperatures to breakdown the soot particles.

Duraterm

By using this technology, drivers can benefit from Bosch's extensive experience with diesel systems. The short preheating time ensures comfortable starting behavior, plus smooth and comfortable running in all load ranges thanks to the post-glow function.

Duraterm HighSpeed

The rapid preheating and long post-glow times of this technology contribute to a longer service life, making it a reliable combustion option in modern-day diesel vehicles. The plugs can be regulated via the glow time control unit, which always ensures the necessary engine temperature. The technology provides quiet idling and comfort in all load ranges, thanks to additional functions such as intermediate and regeneration heating.

DuraSpeed

The specific shape of the ceramic heating element and special protective tube reduces the risk of breakage, even if the glow plug is exposed to lateral forces. It provides outstanding starting comfort thanks to very short heating-up phases, high glow temperatures and a long post glow function. It also relieves the alternator during cold starts, due to its design for low power consumption and its ability to reach high temperatures at speed.

Invented for life

BOSCH

Service Spotlight:

The Bosch DuraSpeed Glow Plug

"This glow plug includes a specially designed heating element made of a silicon nitride ceramic material, which sits in a malleable metal tube. The flexible design increases the mechanical robustness of the glow plug as the risk of breakage – even when exposed to transverse forces – is significantly reduced. The ceramic material also ensures a high hot-gas resistance and a long service life."

Selina Trick,
Product Manager for glow plugs at Bosch.

About our experts:

Selina Trick

Selina is in charge of Bosch's global portfolio of glow plugs, with over seven years in the sector and fourteen years working for Bosch.

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For more information on Bosch high-performing glow plugs, please visit us at:
boschaftermarket.com