

Two-stroke

Copenhagen, September 2026

Action code: WHEN CONVENIENT

New low-sulphur fuel nozzle

Concerns

Owners and operators of Everllence B&W two-stroke marine combustion engines.

Types: All engines

Summary

Everllence has developed a new fuel oil injection nozzle for engines operating on fuels with a sulphur content below 0.50%.

Contact details

PrimeServ Service: primeserv-services-dk@everllence.com or RetrofitDK@everllence.com

Reference to existing Service Letters

[SL2026-784/JUSV](#)

[SL2019-670/DOJA](#)

[SL2026-782/SRJ](#)

[SL2014-593/DOJA](#)

[SL2022-726/KNB](#)

[SL2009-515](#)



Low-sulphur fuel nozzle

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New low-sulphur fuel nozzle

With the implementation of stricter environmental regulations, including the 0.10% sulphur Emission Control Areas (ECAs), the IMO 0.50% global sulphur cap, and IMO regulations aimed at reducing CO₂ emissions, vessels are spending an increasing share of their operating hours on low-sulphur, low-viscosity fuels.

As outlined in Service Letter SL2022-726/KNB, we have identified a number of cases involving premature fuel injection nozzle failures. In particular, operation on low-viscosity fuels may lead to crack initiation and propagation from the nozzle holes before the expected service life is reached. The root cause has been identified as high-cycle thermal fatigue.

This is caused by the increased temperature difference between the maximum nozzle temperature reached during combustion and the cooling effect of the injected fuel when operating on low-viscosity fuels.

Typically, HFO is injected at temperatures of 130°C to 140°C. Modern low-sulphur fuels often have sufficiently low viscosity and require little or no heating. Some fuel types even require active cooling to maintain the minimum viscosity requirement of 2 cSt at the engine inlet, resulting in significantly lower injection temperatures than HFO. These larger temperature fluctuations experienced by the nozzle can reduce its service life and, consequently, challenge the specified time between overhauls.

To address this, Everllence has developed a new fuel oil injection nozzle for engines operating on fuels with a sulphur content below 0.50%. Since 1 October 2025, the low-sulphur fuel nozzle has been included as the standard for new engine orders specified for operation on such fuels. For engines already in service, the new fuel nozzle is available as a retrofit solution to mitigate the risk of premature nozzle failure caused by crack propagation when operating on low-viscosity fuel oils.

The low-sulphur fuel nozzle is designed to withstand the higher thermal stresses associated with low-viscosity fuel operation, thereby supporting reliable engine performance. It is designed for use in engines operating on biofuels (see SL2026-784 for applicable biofuel types and operational guidelines), low-viscosity low-sulphur fuel oils, or diesel oil with a maximum sulphur content of 0.50%. Its enhanced design supports the guiding overhaul intervals in accordance with Service Letter SL2026-782/SRJ when operating within the above conditions.

Table 1

	Low-sulphur fuel nozzle	Original fuel nozzle
<0.10% to <0.50% sulphur fuels (ISO8217)	Yes	
Biofuels and blends <0.10% to <0.50%S (SL2023-741)	Yes	
Fuel with a sulphur content above 0.50%		Yes
Biofuels and blends with a sulphur content above 0.50% (SL2023-741)		Yes

The low-sulphur fuel nozzle is designed with the same spray pattern as the original fuel nozzle, enabling straightforward installation by the vessel's crew during routine overhauls, with no Everllence attendance required. The nozzle is fully interchangeable with the original design.

Everllence will support the necessary update to the IMO NO_x Technical File to ensure continued regulatory compliance.

Please contact your local Everllence PrimeServ office or RetrofitDK@everllence.com for more information about the new low-sulphur fuel nozzle.

Yours sincerely,



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