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EU emissions regulations prioritise safety in potentially explosive atmospheres

Pyroban reports that the emissions regulations (EU 97/68/EC* Directive) have been amended to support the special application of diesel engines, such as those in forklifts, used in potentially explosive atmospheres, where safety is paramount.

“The conflict between the safety requirements of the ATEX directive and the technologies applied to meet the requirements of the emissions directive have been a cause for concern for several years,” says Steve Noakes, Engineering Manager for explosion protection conversion experts Pyroban. “For example, during self-cleaning cycles, diesel particulate filters (DPFs) within lower emissions engines exceed the internal and external surface temperatures permitted under the ATEX directive.”

“Furthermore, future emissions requirements will include complex exhaust control systems which pose additional conflicts with ATEX requirements. Removing or bypassing these systems isn’t permitted and can create error codes which prevent forklift trucks from operating,” he continues.

ATEX compliant forklift trucks are regularly used in chemical, pharmaceutical, waste, cosmetics and food and drink sectors. Explosion protection involves big changes to the engine to reduce the engine exhaust gas temperatures and surface temperatures which could pose a risk of ignition.

To help forklift users overcome these issues, the UK government has been instrumental in lobbying for current and future emissions directives to be amended. As a result, an amendment to 97/68/EC was published in September 2016 which states that the EU *‘may authorise, on request by an OEM, the placing on the market of engines that meet Stage III A emission limit values, provided that those engines are intended for use in non-road mobile machinery to be used in potentially explosive atmospheres as defined in...Directive 2014/34/EU**’*.

This amended directive means that the emissions limits for ATEX converted trucks are capped at Stage IIIA levels, ensuring that the engines can still be converted for safe use in

potentially explosive atmospheres. However, to comply with the derogated regulations, engines fulfilling the above requirements will be required to carry additional labelling.

“Many truck manufacturers supply non-EU countries where higher emissions levels are permitted, so they can now legitimately provide trucks with these same engines into Europe for use in ATEX applications,” explains Steve. “This will benefit operations that need higher capacity forklifts, such as LPG bottling plants, as they will now legally be able to opt for these trucks with simpler engines.”

The derogation applies from 6th October 2016 as a temporary measure in place until Stage V emissions regulations start to come into force for engines or machinery placed on the market in January 2019. The Stage V requirements will continue to permit Stage IIIA emission level engines on non-road mobile machinery for use in potentially explosive atmospheres.

“Influencing and changing directives is not easy but working with the UK government on this project in recent years has been a key priority for Pyroban as it is so crucial to the whole industry,” says Steve. “We are grateful for the support of the EU commission and member states who understand the importance of safety and have supported these changes.”

For more information on the amended regulations and explosion protection for forklift trucks and materials handling equipment, contact safety company Pyroban.

Visit www.pyroban.com.

* 97/68/EC – European regulation which limits pollutant emissions of Non-Road Mobile Machinery

** Article 61, Amendments to Directive 97/68/EC -

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2016:252:0053:0117:EN:PDF>

NOTES

Pyroban Ltd provides explosion protection safety solutions for industry world-wide. The company was founded in 1972 with manufacturing facilities in the UK, the Netherlands, Asia-Pacific and China with regional sales and service centres.

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