

Wärtsilä FuelFlex injection control unit upgrade



The Wärtsilä FuelFlex injection control unit (ICU) upgrade ensures reliable performance of 2-stroke engines by preventing common issues resulting from vessels switching to low-viscosity fuels in order to comply with the requirements of the 2020 global sulphur cap. The upgrade ensures that engines run safely and reliably regardless of the fuel type in use and reduces maintenance costs over the ICU's lifetime.

RELIABLE OPERATION REGARDLESS OF FUEL TYPE

Switching to low-viscosity fuels in order to comply with regulatory requirements can result in issues with fuel injection components such as increased fuel leakages and uncontrolled injection caused by premature wear to the ICU sealing area. As a consequence, in order to allow safer engine operation with the previous generation ICU for the RT-flex96C-B and RT-flex84T-D engines, a reduction of up to 30% in time between overhaul is recommended. ICU malfunction and fuel leakage from high pressure pipes are the most common causes of failure in these Wärtsilä 2-stroke engines, accounting for up to 70% of unexpected engine stops according to customers' feedback. The Wärtsilä FuelFlex ICU upgrade has been developed for these engine models to ensure reliable operation regardless of the fuel type in use.

KEY BENEFITS

- Reliable ICU performance regardless of fuel type
- Reduction of up to 70% in unexpected engine stoppages
- Optimised maintenance costs and reduced carbon footprint thanks to onboard maintenance

IMPROVED ICU PERFORMANCE

The Wärtsilä FuelFlex ICU is based on our third-generation ICU and features a robust design with improved materials, a wider seal surface and a simple filling mechanism with improved leakage performance. These improvements optimise ICU performance and reliability while keeping the time between overhaul to 36,000 running hours.

REDUCTION OF UP TO 70% IN UNEXPECTED ENGINE STOPS

As well as increasing the reliability of the ICU, we have re-engineered the interface to the high-pressure pipe with a spherical shape to prevent plastic deformation. This kind of deformation should be prevented as it can cause significant fuel leakages, resulting in unplanned main engine downtime and increased operating costs as well as possible commercial losses and reputational damage.

OPTIMISED MAINTENANCE COSTS AND REDUCED CARBON FOOTPRINT

Wear parts can be easily replaced on board by crew using a simple repair kit. This optimises operating costs and reduces the vessel's carbon footprint by avoiding the need to transport heavy components to a workshop for remanufacturing.

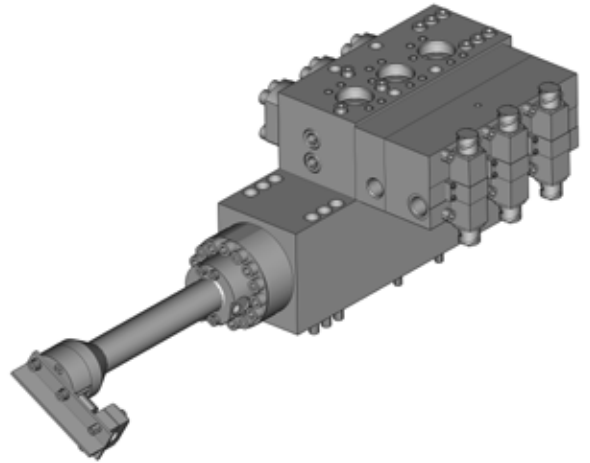
DELIVERY SCOPE

The standard delivery includes the following:

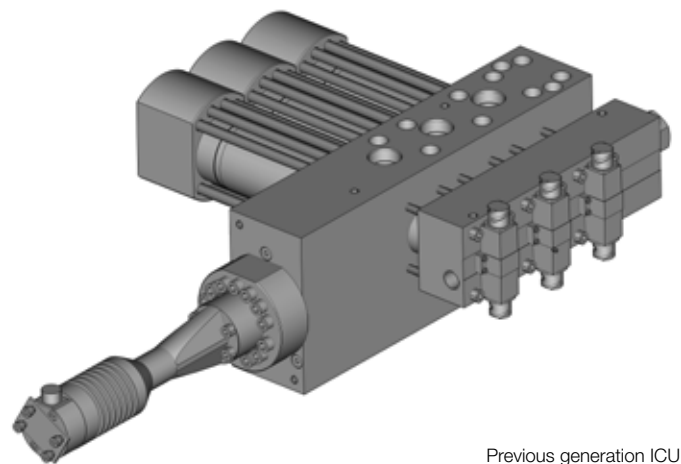
- FuelFlex ICU with interface plate
- Spherical high-pressure fuel pipe
- Fuel leakage piping adaptation
- Rail unit cover
- Fuel valve assembly kit for onboard maintenance
- Upgrade to WECS software
- Technical file amendment

WHY CHOOSE WÄRTSILÄ?

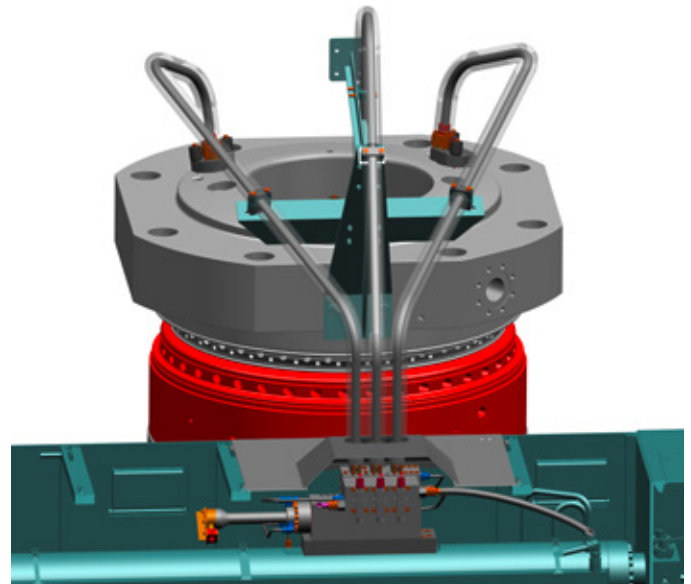
Wärtsilä has a global service network and expert engineers to carry out upgrade work and is the only provider with a full spectrum of ICU maintenance solutions including repair kits, remanufactured ICUs, ICU upgrades and relevant lifecycle solutions that optimise the efficiency and performance of marine assets.



Wärtsilä FuelFlex injection control unit for the RT-flex96C-B and RT-flex84T-D engines



Previous generation ICU



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