

## TC-LUBE

FOR INDEPENDENT LUBRICATION OF TURBOCHARGERS







## TC-LUBE

TC-Lube Is a separate lubrication system dedicated to the development and testing of turbochargers (TC). It includes programmable temperature and pressure regulation systems.

TC-Lube allows to lubricate turbochargers independently from the engine block. It can be used as a stand-alone unit that regulates automatically oil temperature and oil flow in the turbocharger. These parameters can also be regulated externally through a test rig / test bed control system. TC-Lube can also be combined to on-line measuring tools for monitoring oil consumption (turbine stage and compressor stage, independently), oil dilution by fuel, oil aeration and bearing wear.

## RANGE OF APPLICATIONS

- To lubricate a turbocharger independently from the engine. The turbocharger can be lubricated with a different oil formulation from the engine oil, at a different pressure, and/or at a different temperature;
- To study oil consumption issuing from the turbocharger only. TC Lube can be coupled to "C-Lube" equipment for on-line measurement of oil consumption associated to the compressor stage and/or to the turbine stage. Various types of lubricants can be used to study the impact of their formulation on oil consumption;
- To study turbocharger bearing wear. TC-Lube can be coupled to the TLA/RNT equipment for on-line monitoring of turbocharger bearing wear independently from the rest of the engine. Thin sand particles and/or diluted oil can also be added into the TC lubrication circuit to study their impact on bearing wear, without damaging the engine;
- To investigate lubrication limits. Combination of a TC-Lube equipment with online wear measuring tools make it possible to determine the minimal oil pressure needed at various operating conditions: continuous operation or during specific cycles such as Stop & Start cycles.







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