

Design a Validation Program for a "world engine"

Background

- Application of an engine, transmission, drivetrain to various machines or vehicles might result in highly diverse duty cycles
- No single critical application but certain aspects most critical for certain applications
- One common validation program has to exhibit sufficient coverage for all the related reliability risks

Customer benefit

- One common Validation Program for a globally used engine family
- Consideration of a large number of duty cycles and boundary conditions
- Usage of component- and assembly-specific Validation potential
- Massive cost advantage without loss of Reliability Demonstration



Requirement

- Identify the validation requirements for all intended applications
- Determine synergies from parts communality
- Transfer validation test results to other variants and usage conditions
- Evaluate the level of reliability demonstration for each application

Solution: Uptime LOCATE™

- Assessment of the Reliability Risks on the base engine and base application
- Assessment of specific risks for variants and further applications
- Generation of reference duty cycles
- Evaluation of common and specific test requirements, sequence, number & duration
- Evaluation of reliability growth