

# The Validation Program for a HD engine family

## Background

- Application of an engine family to various machines and vehicles results in highly diverse duty cycles
- No worst-case application but certain aspects are critical for certain operation modes
- One common validation program has to exhibit sufficient coverage for all variants and applications

## Customer benefit

- One common validation program for an engine family with a large number of duty cycles
- Usage of component and function groups for validation
- Massive cost advantage from common parts synergies

## Requirement

- Identify the validation requirements for all intended applications
- Determine synergies from parts communality for transfer of validation results to variants
- Evaluate the level of reliability demonstration for each application

## The Solution with Uptime LOCATE

- Assessment of the reliability risks for all engine variants and their applications
- Generation of reference duty cycles for evaluation of common and specific tests, test sequence, repetition and duration
- Reliability growth monitoring for project steering

