Conversion of a standard conventional test bed to a H2 test bench

THERE ARE MAINLY TWO PARTS THAT NEED TO BE CONSIDERED DURING THE RETROFIT OF AN ENGINE TEST BENCH

**RETOFIT MEASURES FOR THE SAFETY SYSTEM**
- Definition of the necessary ex-protective measures
  - Gas sensors
  - Air exchange rate
  - Additional ATEX ventilation
  - ...
- Description of the adaption of the safety system

**HYDROGEN SUPPLY INFRASTRUCTURE**
- Hydrogen specification for engine test benches
  - Volume flow
  - Pressure
  - Quality
  - Use cases
  - Engine power range

**Important:** We can offer planning & consulting services in advance to support our customer in finding best concept
Retrofitting of an Engine Test Bench for Hydrogen Operation
Necessary Adjustments and Items

OVERVIEW COMPONENTS

- **Exhaust measuring system**
- **BlowByRate**
- **AirRate**
- **H₂Rate**
- **H₂Con**
- **Hydrogen supply**
- **Additional ATEX-Ventilation**
- **Ventilation system**
- **Exhaust gas**
- **Frequency converter**
- **Automation System**
- **Sub-distribution unit**
- **Safety system**
- **Building structure**
- **Gas detection system – H₂**
- **Fire protection system – H₂**
- **CoolSim Intercooler**
- **Integrate**
- **Dyno**
- **Test bench**
- **Exhaust gas**
- **LubCon**
- **FuelCon**
- **FuelRate**
- **CoolCon**
- **AirCon**
- **ATEX regulations**
- **Fire protection**
- **Official permits**

Adjustment: ○
New item: □
No adjustment: □
No need: □

Source: FEV