



Any kind of tests :

- **Industrial Engines**
- **Automotive Engines**
- **Small Engines**
- **Automotive Powertrain**
- **Components**
- **Tribology**
- ...

Founded in 1989, by Daniel DRECQ an engine engineer, in order to build up a French innovative engine&powertrain R&D and testing centre, D2T has shown a strong continuous growth, and has continuously developed products and services dedicated to engine and powertrain R&D and testing.

D2T offers a full range of testing services in its plant of Trappes. Close to the main car manufacturer's R&D centres and Paris airports, D2T offers the flexibility and all necessary skills to fulfil customer's request about engine or powertrain testing. Respect in timing and quality of results and measurements are warranted by D2T.



PRESENTATION

Certified ISO 9001, D2T's test centre is using latest technology equipments. Highly qualified and experienced staff allows D2T to offer a wide range of testing capabilities and services.

TEST BEDS SPECIFICATIONS

- 20 test beds are equipped with emission benches and combustion analysis :
- 2 dynamic powertrain test beds with gear box robot.
 - 3 low-dynamic test beds for tribology tests or motoring mode tests.
 - 2 high dynamic test beds with road load and vehicle simulation.
 - 1 test bed for hybrid engine or components.
 - 11 standard test beds.
 - 1 mobile test bench.

Machines for special tests :

- Permeability
- Hydraulic flows simulation
- Scavenging
- ...

TEST BEDS :

- 2 AC-Machines 130kW and 220kW
- 3 Tandem Machine 220kW / 70kW.
- 1 AC-Machine 10 kW.
- 18 EC-Dynos :
220kW / 800Nm, 440kW / 2850Nm,
250kW / 22 000RPM,...

FLUID CONTROL & REGULATION :

- Turbo-charger air cooling
- Intake air conditioning (-30 °C or 20 to 25 °C / 35 to 55% humidity)
- Engine oil conditioning
- Engine coolant conditioning
- Fuel (25 at 45 °C +/- 0.5 °C)

ACCESSORIES SIMULATION :

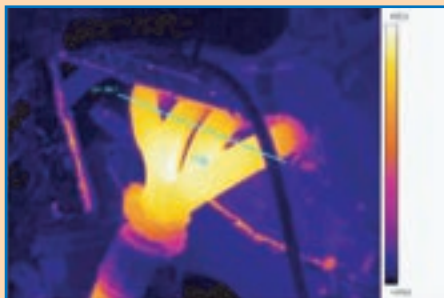
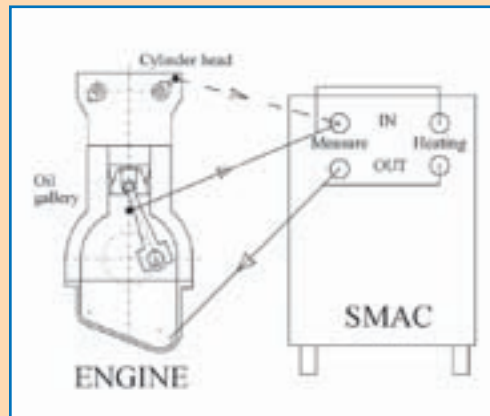
- Alternator loading device
- Air compressor and power assisted steering pump loading devices
- ...



SPECIAL MEASUREMENTS

In addition to its outstanding test capacities, D2T provides special measurements devices to its customers :

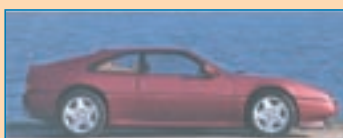
- Instantaneous speed and acyclism.
- Real time air-oil ratio or emulsion rate of oil circuit.
- Engine oil instantaneous analysis.
- Vibratory analysis.
- Stresses and buckling.
- Front flame speed propagation.
- Surface temperature and infra-red thermography.
- Material temperature.



APPLICATIONS

D2T's technicians and engineers have testing experience and qualification to ensure following applications :

- Engine characterization.
- ECU mapping.
- Combustion chamber characterization
- Injection system calibration.
- Methodology development.
- Preparation of racing cars or racing engines.
- Engine certification, Euro III and Euro IV cycles including transient testing.
- Prototype powertrain integration in specific cars or vehicles.
- Powertrain and engine reliability, thermal shock.
- Engine assembly, parts expertise.



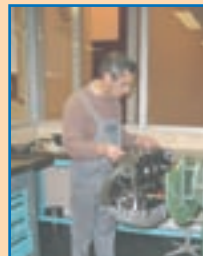
All D2T products are warranted against defects in materials and workmanship for one year from date of delivery to the original purchaser. Specifications are subject to change without notice.

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MECHANICAL SERVICES

In order to guarantee necessary confidentiality to our customers, D2T offers mechanical capabilities able to cover 100% of the customer's needs :

- Engine assembling and disassembling.
- Powertrain and engine instrumentation.
- Prototype parts machining.
- Parts adaptation and realisation of specific gearboxes for test beds
- Powertrain and engine preparation.
- Exhaust line installation.
- Engine and parts appraisal after tests.



ORGANISATION

D2T is organized around a proven testing methodology and a mastered process in order to reach a very high level of efficiency.

TEST FACILITIES

- 7 days / 7 and 24 hours / 24.

STAFF

- Permanence on week-end and during trial tests.
- Staff on two or three shifts (2x8 or 3x8) depending on customer fs needs.
- Staff on two shifts (2x8) for technical tests or tuning engine tests.
- Project manager and customer fs interlocutor are engine engineers.
- Bench drivers are «Measurements and Mechanical Technicians»
- Assembling and preparing engines done by the bench operator (Polyvalence).

TESTS FACILITIES AVAILABILITY

- 97 to 98 %.

WEEKLY WORKING RATE

- 110 hours if delays due to the customer are less than 10 % for a trial run.
- 55 % for an engine tuning test.

BEST PERFORMANCES

- 650 running hours in 1 month.
- 65 % of running on three test beds during one year.
- 14 test beds on trail run on week-end.

