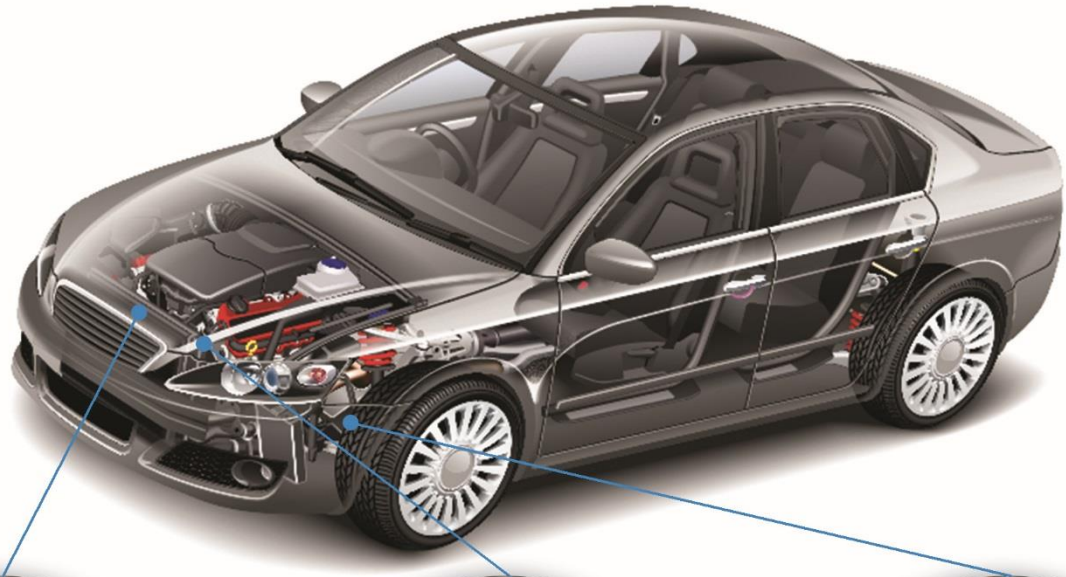
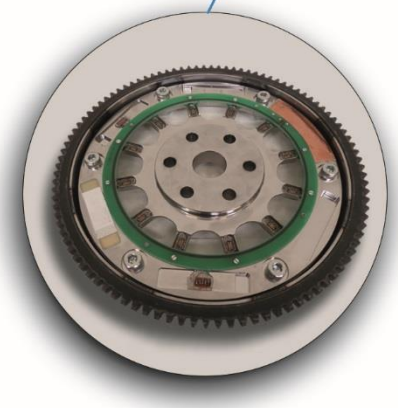
Torque testing solutions

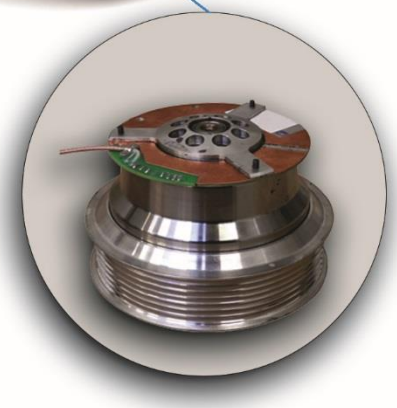
High accuracy in-vehicle torque measurement
Designed for vehicle real use applications

GREENMOT has developed various torque measurement systems providing high dynamic accuracy in the "in-vehicle" real use environment. Sensitive parts of these customized sensors are designed and validated by GREENMOT to be less sensitive to external perturbations like temperature, misalignment, or Coriolis effects in real use.

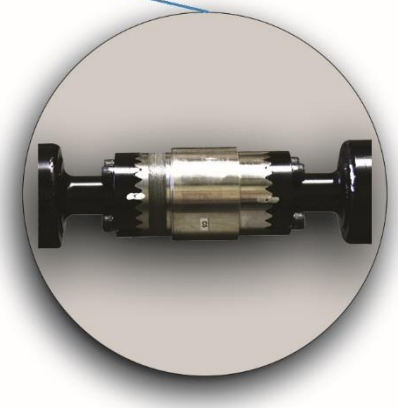




Engine torquemeter
1 N.m accuracy



Pulley torquemeter
0.3 N.m accuracy



Driveshaft torquemeter
0.1 N.m accuracy

Applications

Engine mapping / development – Transmission development – Hybrid powertrain development
Traction control – Energy flow mapping – Engine vehicle integration

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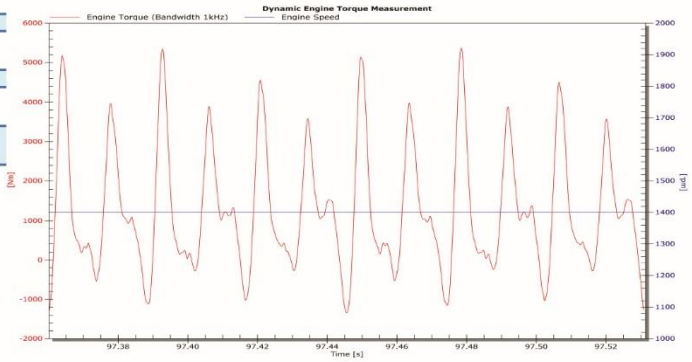
Engine torque measurement system

Technical specifications

Type of sensor	**Strain gauges - HF Telemetry** **Intgrated in the original design**
Torque capacity	Dependent of maximal engine torque, typically : · **0 - 500 N.m** or **0 - 1 000 N.m** for passengers car · **Up to 0 - 10 000 N.m** for industrial engine
Maximum speed	Dependent of the engine
Accuracy	**0.2 % FS in real use in-vehicle environment**
Bandwidth	1 kHz
Temperature range	-10°C / +120°C
Supply	10V to 34V
Output Type	0 - 10V



Driveshaft measurement system

Technical specifications

Type of sensor	**Strain gauges – HF Telemetry** **Integrated in the original design**
Torque capacity	**0 - 1 000 N.m**
Maximum speed	3 000 rpm
Accuracy	**< 0.01 % FS**
Bandwidth	1 kHz
Temperature range	-10°C / +80°C
Supply	10V to 34V
Output Type	0 - 10V

Pulley measurement system

A/C Pulley – Power steering pulley – Hydraulic pumps pulley – Remote alternator – Crankshaft main pulley

Technical specifications

Type of sensor	**Strain gauges – HF Telemetry** **Integrated in the original design**
Sensor inertia	120 kg.mm²
Torque capacity	**0 - 100 N.m**
Maximum speed	6 000 rpm
Accuracy	**0.3 % FS in vehicle environment**
Bandwidth	1 kHz
Temperature range	-10°C / +80°C
Supply	10V to 34V
Output Type	0 - 10V

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