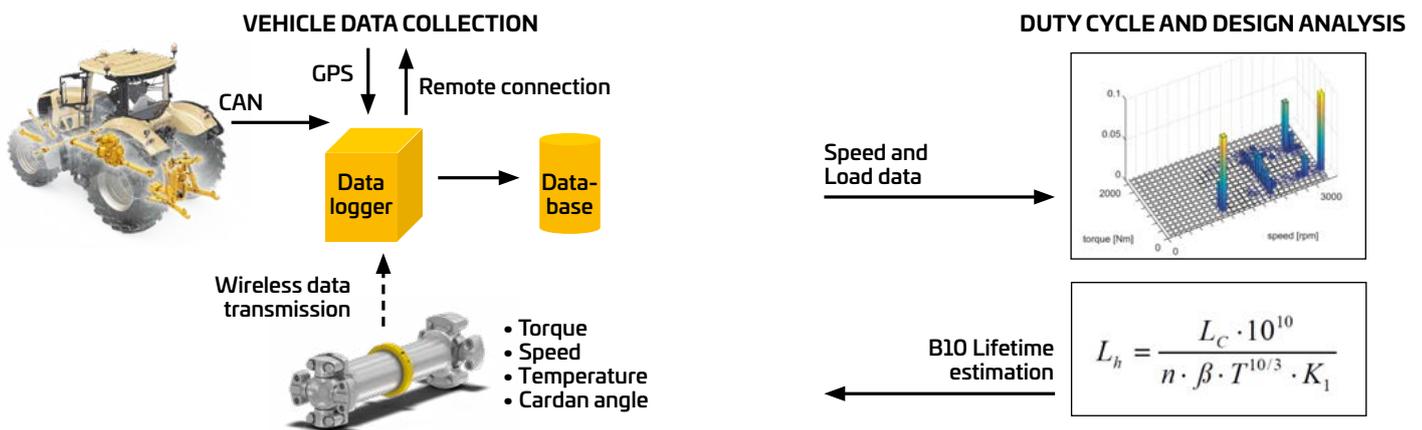


SMART Duty Cycle Analysis



Driveshaft selection done the „SMART“ way!

Every calculation model is only as good as the input. If only there was a clever way to capture real world duty cycles to avoid having shafts under/oversized based on estimations. With Walterscheid Powertrain Group's integrated SMART & Connected Technology, now there is! Through integrating sensor functionality into the driveshaft, we make duty cycle measurement under real conditions accessible to our customers. This service is an important enhancement to our existing capabilities of life estimation; especially in marginal applications.



Our Deliverables

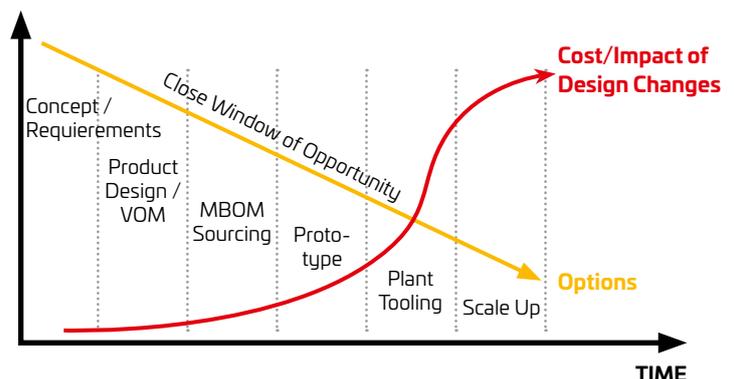
Engineering service including:

- ▶ Recording of driveline parameters under realistic driving conditions
 - Drive shaft torque
 - Bearing temperature
 - Rotation speed
 - Vibration
 - GPS Position
- ▶ Calculation of duty cycle and resulting component lifetime
- ▶ Assessment of drivetrain design
- ▶ **Risk assessment** of potential drive shaft failure modes
- ▶ **Detailed report from powertrain experts**
- ▶ Onsite presentation and discussions of implications

Customer Value

- ▶ **Purchase decision-making simplified:** assists in selecting right drive shaft size for the application

- ▶ **Drivetrain design optimization** leading to, for example, noise reduction, efficiency improvement, lifetime improvement
- ▶ **Reduced total cost of quality:** Design review and risk assessment by drivetrain experts; avoiding costly redesign and recall at a later stage



Walterscheid Powertrain Group Service Centre Locations



FIELD SERVICE AND DIGITAL SOLUTIONS

Service Centre Bönen

Off-Highway Powertrain Services
Germany GmbH
Siemensstr. 6
59199 Bönen
Germany
Phone: +49 (0) 2383 921 15 0
service.boenen@walterscheid.com

CARDAN COMMERCIAL VEHICLES

Service Centre Düsseldorf

Off-Highway Powertrain Services
Germany GmbH
Gutenbergweg 2
40699 Erkrath
Germany
Phone: +49 (0) 2104 933 746
customerservice.duesseldorf@
walterscheid.com

CARDAN INDUSTRY

Service Centre Hamburg

Off-Highway Powertrain Services
Germany GmbH
Ottensener Straße 150
22525 Hamburg
Germany
Phone: +49 (0) 40 5400 900
customerservice.hamburg@
walterscheid.com

CONSTANT VELOCITY SHAFTS

Service Centre Frankfurt

Off-Highway Powertrain Services
Germany GmbH
Gewerbepark Hasselroth
Senefelder Str. 6
63594 Hasselroth
Germany
Phone: +49 (0) 6055 883 09 – 48
service.frankfurt@walterscheid.com

PRODUCTION ONLY

Service Centre Nürnberg

Off-Highway Powertrain Services
Germany GmbH
Am Keuper 1
90475 Nürnberg
Germany

Service Centre München

Off-Highway Powertrain Services
Germany GmbH
Siemensstr. 11
85221 Dachau
Germany



Service Centre Vienna

Powertrain Services Austria GmbH
Slamastraße 32
1230 Wien
Austria
Phone: +43 (0) 1616 38 800
service.austria@walterscheid.com



Service Centre Amsterdam

Powertrain Services Benelux BV
Haarlemmerstraatweg 153-157
1165 MK Halfweg
Netherlands
Phone: +31 (0) 20 4070 207
service.netherlands@
walterscheid.com



Service Centre Sint-Truiden

Powertrain Services Benelux BV
Groenstraat 5920, bus 2
3800 Sint-Truiden
Belgium
Phone: +32 (0) 11 59 02 60
service.belgium@walterscheid.com



Aftermarket & Service China

万特赛传动技术 (中国) 有限公司
Walterscheid Powertrain (China) Co. Ltd.
Building 17, 188 East Guangzhou
Rd, 215400 Taicang, Jiangsu
China
Phone: +86 512 535 818 00
service.china@walterscheid.com



Service Centre København

Powertrain Services Scandinavia AB
Baldershøj 11 A+B
2635 Ishøj
Denmark
Phone: +45 (0) 44 86 68 44
service.denmark@walterscheid.com



Service Centre Paris

Powertrain Services France SA
8 Rue Panhard et Levassor
78570 Chanteloup les Vignes
France
Phone: +33 (0) 130 068 400
service.france@walterscheid.com

ALL SERVICES AND PRODUCTS



Service Centre Chalon sur Saône

Powertrain Services France SA
6b rue Alfred Kastler
71530 Fragnes
France



Service Centre Leek

Powertrain Services UK Limited
Higher Woodcroft
Leek
Staffordshire ST13 5QF
Great Britain
Phone: +44 (0) 153 838 42 78
service.uk@walterscheid.com



Service Centre Milano

Powertrain Services Italy SpA
Via G. Ferraris 125/C
20021 Bollate, Milano
Italy
Phone: +39 02 38 33 81
service.italia@walterscheid.com



Service Centre Oslo

Powertrain Services Scandinavia AB
Karihaugveien 102
1086 Oslo
Norway
Phone: +47 (0) 23 286 810
service.norway@walterscheid.com



Service Centre Stockholm

Powertrain Services
Scandinavia AB
Alfred Nobels Allé 110
146 48 Tullinge
Sweden
Phone: +46 (0) 8 603 97 00
service.sweden@walterscheid.com



Service Centre Regensdorf

Off-Highway Powertrain Services
Germany GmbH
Althardstraße 141
8105 Regensdorf (Zurich)
Switzerland
Phone: +41 (0) 44 87 16 070
service.switzerland@
walterscheid.com



Service Centre Madrid

Off-Highway Powertrain Service
Spain, Sociedad Limitada
Calle Garzas 10A
28320 Pinto
Spain
Phone: +34 91 690 95 77
service.spain@walterscheid.com



Service Centre České Budějovice

Powertrain Services Austria GmbH
Pekárenská 54
370 04 České Budějovice
Czech Republic
Phone: +42 (0) 387 314 125
service.czech@walterscheid.com



Aftermarket & Service North America

Powertrain Rockford Inc
1200 Windsor Road
Loves Park, IL 61111, USA
Phone: +1 815 633 746 0
mechanics@walterscheid.com



Service Centre Russia

Walterscheid (RUS) LLC
Leninskaya Sloboda 19 room 21k
115280 Moscow
Russia
Phone: +7 495 646 56 81
service.russia@walterscheid.com