

# FABLAB: SPECIAL DIAGNOSTICS

Diagnostics of hydraulic systems and applied metrology

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PSZ/12

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**ŠKODA**  
SIMPLY CLEVER

# Activities overview – Fluid



## Measurements

*„Operational diagnostics of hydraulic system when the problem occurs.“*



## Test stand

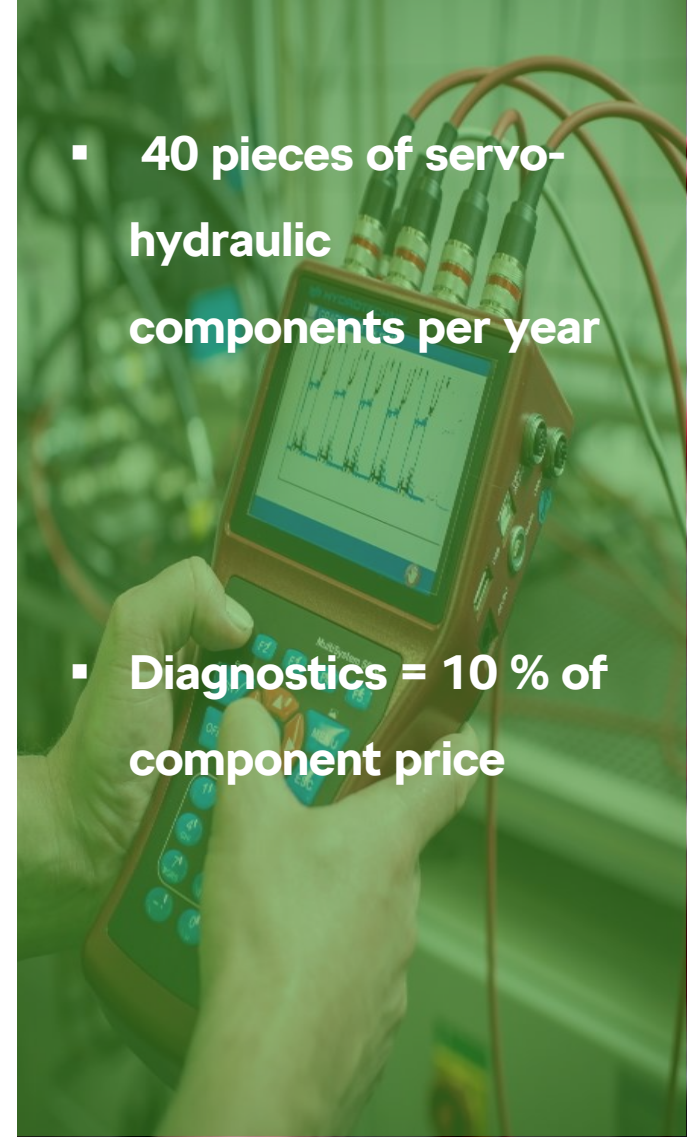
*„Testing each hydraulic component of the system under simulated operating conditions.“*



## Standardization

*„Managing our internal standards and documentation.“*

- 40 pieces of servo-hydraulic components per year
- Diagnostics = 10 % of component price



# ACTIVITIES EVOLUTION

From ON / OFF values to system data analysis



*Component testing – test stand*



*Manual controller – data analysis*



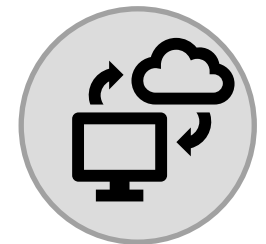
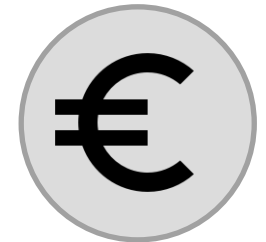
*Automation of measuring process*



# THE FUTURE

## Fluid diagnostics

- Automation of test cycles „one touch“
- Test cycles databank
- Enhancing test portfolio according to production requirements
- Turnkey diagnostic service ( TRIBO,VIBRO,FLUID, METRO )
- Avoidance of losses - reduction of the risk of downtime in  
the amount of 3.5 mil. € / year



# THANKS FOR YOUR ATTENTION!



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# FABLAB: SPECIAL DIAGNOSTICS

Diagnostics and applied metrology

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# Activites overview – metrology



## Special measurement

*„7-axis FaroArm and laser technology.“*



## Mechanical measurement

*„Operational measurment in M15.“*



## Standardization

*„Managing our internal standards and documentation.“*

**Cost comparison:**

internal / external  
technician  
**28 € / 98 €**

**Example:**  
Overhaul

(PSZ) – 11 machines  
„Alfing“ located at M6  
hall (PK)  
**17 Tsd. €**

**97 discoveries**

# ACTIVITIES EVOLUTION

From a caliper to the present



*Mechanical measurement*



*Measuring with 7-axis FaroArm*



*Laser measurement*





# New optical measurement device

## Keyence IM 8000

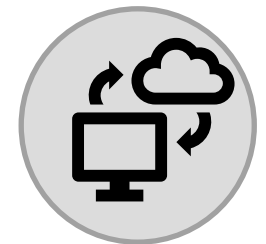
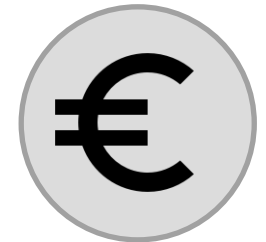
- Faster, simpler and more accurate dimensional measurement
- Measuring up to 300 dimensions of 100 parts with one click
- Automatic data saving and creating of control reports
- Easy to set up and prepare for measuring
- Accuracy 0,001 – 0,002 mm
- Price 70 500 EUR



# Special diagnostics

## THE FUTURE

- Measurements of machine geometry by laser tools
- Enhancing test portfolio according to production requirements
- Measurement reports stored in SAP
- Turnkey diagnostic service (METROLOGY)
- Avoidance of losses - reduction of the risk of downtime in the amount of 10 mil. € / year



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