Status reports

- ISO 15484 Brake Linings
- Brake Test Variability
- SAE J2468 Compressibility

Report to SAE Congress 2011

Roy H. Link

SAE International

Status report

ISO 15484

Product Definition and Assurance Brake Linings

Project leader:

Harald Abendroth, Chairman - ISO TC22/SWG2

SAE International

ISO 15484

- Progress ongoing (5-year review)
- Adopted and published by ISO
- Wide participation from Europe, Asia, North, and South America
- Matrix of test protocols to characterize materials (PC and CV)
- Currently in use around the world in varying forms

Status report

Brake Test Variability
Performance Dyno

Project leader:

Dr. J. Grochowicz – Ford Europe

SAE International™

Phase 1: SAE 2010-01-1697

Analysis of Root Causes

5 dynamometers using ISO friction test

- *Repeatability within 0.02 μ*
- *Reproducibility within 0.04 μ*

Main sources of variation

- *Friction calculation and parameters*
- *Temperature measurement*
- *Cooling air setup and speed*

Phase 2: SAE 2011-01-TBD

Description of the influencing factors

7-factor; 2-level Design of Experiments

1. Pad environmental conditioning
2. Temperature measurement
3. Caliper drag
4. Cooling air setup
5. Energy level
6. Burnish length
7. Environmental conditions

Next steps

Complete DOE (Ford/LINK)

Present at SAE Brake Colloquium 2011 –New Orleans

Launch ISO Task forces:

- *Expand on other tests and topics*
- *End-product: ISO Technical Reports*

Status report

SAE J2468 revision - Compressibility

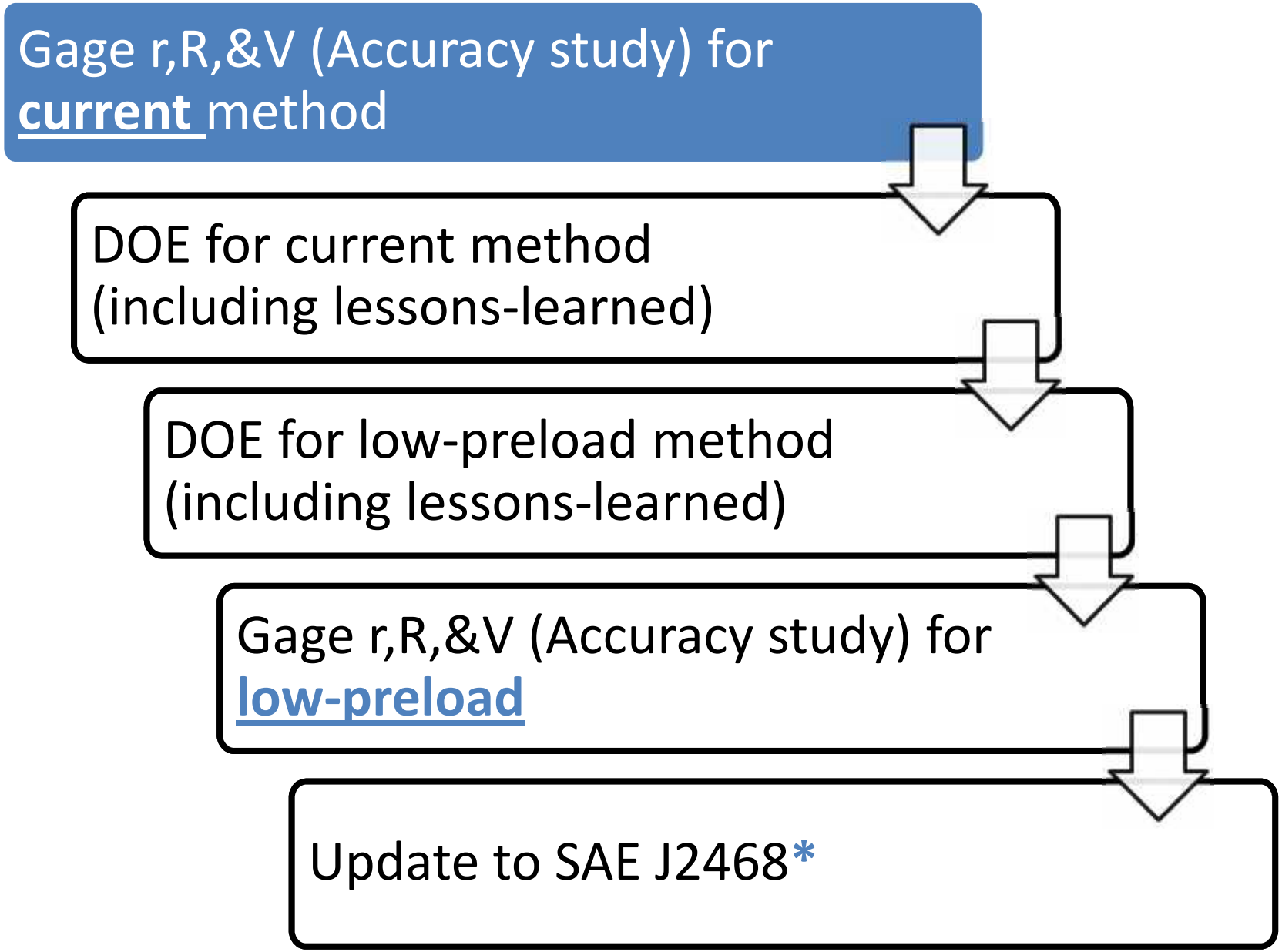
Project leader:

Ken Hamann — Link Engineering

SAE International

Background

- GM studies on pedal-feel
- Industry investigations on low-energy NVH
- Overall need to better understand test variability



***potential input for ISO 6310 updates**

Next steps

Complete plan for accuracy study

Assess current method at 5 bar

Execute tests

Evaluate results

29th Annual SAE 2011
Brake Colloquium & Exhibition

September 18-21, 2011

New Orleans, Louisiana, USA

Thank you

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