

SANS 1589 Part I Compliance testing

Compliance Brake testing for TMM's

Virtual day of Learning Webinar

Mineral Council South Africa

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Presented by Danie Yssel

Gerotek Test Facilities

SANS 1589 Part I

Compliance testing

What is compliance testing?

SANS 1589 Part 1

Compliance testing

What is compliance testing?

2.9

Compliance testing

The evaluation of a machine braking system against the general and performance requirements specified in this standard.

SANS 1589 Part I

Compliance testing

If you specify it, you must be able to evaluate it.

Methods of evaluation are:

- Analysis (getting a “better understanding”)
- Demonstration (practical “exhibition”)
- Examination (“inspect”)
- Testing (“measure”)

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“Static” evaluation

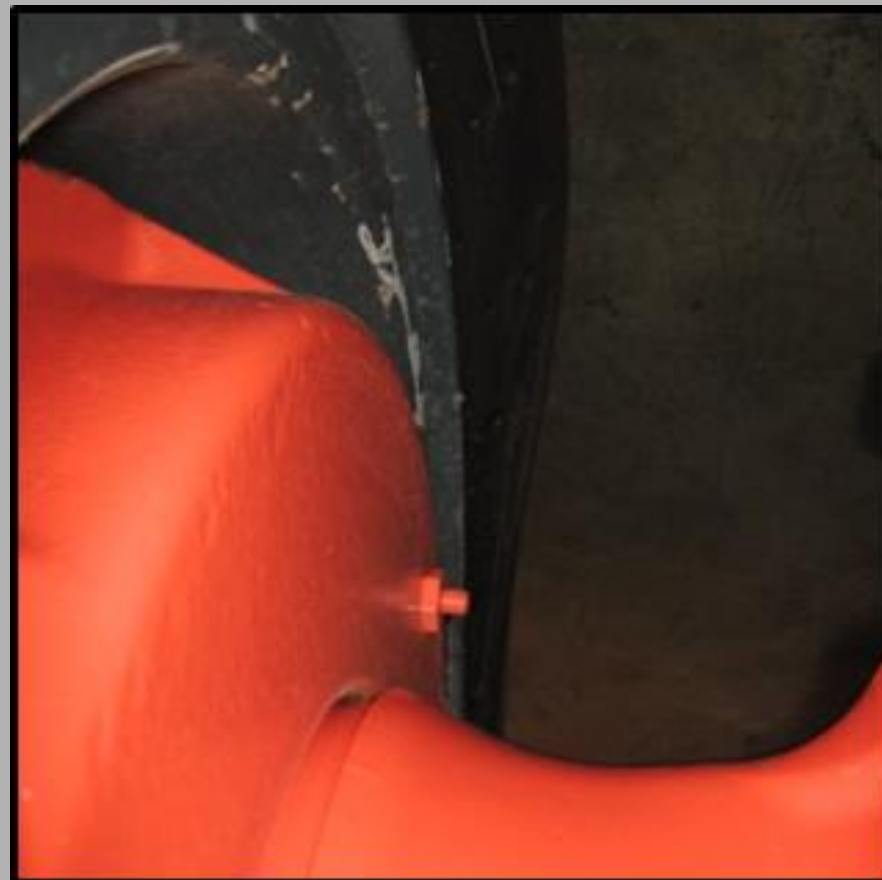
- Presence of the various systems.
- Common components.
- Pressure test connections.



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Compliance testing

- Circuit design.
- Brake wear indicators.



SANS 1589 Part 1 Compliance testing

- The accessibility of Control from operators' position.
- Service brake - gradual braking.
- Actuation of multiple controls.
- Influence of “other” systems on braking system.
- Marking of brake controls.



SANS 1589 Part I

Compliance testing

Dynamic tests

Service braking system

- Forward and reverse
- Stopping distance
 - System response time (t) = 0.35 sec for formula
 - $a = 4.0 \text{ m/s}^2$
- System response time check
- “Recovery” of brake system
- Gradient hold (gradient of 32%)
- Hot fade stopping distance.

$$s = \frac{vt}{3.6} + \frac{v^2}{13 \times 2a}$$

SANS 1589 Part 1

Compliance testing

Dynamic tests

Secondary (“emergency”) brake

- Stopping distance
 - System response time (t) = 1 sec for formula
 - $a = 3.6 \text{ m/s}^2$
- System response time check.
- Fail safe brakes.
- Stopping distance.

$$s = \frac{vt}{3.6} + \frac{v^2}{13 \times 2a}$$

SANS 1589 Part 1 Compliance testing

Park brake system
12 hours + on slope of 32%.

