

Viking ceramic comparison - lab report example

[Science](#), [Social Science](#)



Viking Ceramo ST Comparison

October 16, Marketing Ali Alsharif RE: Report: Viking Ceramo ST Comparison

Introduction The report will statistically analyze the differences between the Viking Ceramo and Viking Metallica brake pads. The variables are based on the price, performance and features of the two brake pads. The report will use the variables to gauge the cons and pros of the pads and come up with the winning brand (Beer and David 48).

Background

Individual analysis and data examination were carried out to come up with detailed information. Figures from the statistical tables and known facts were used to comprehend the recommendations for the marketing department. The ceramic brakes seem to last longer despite daily vehicle activities. Additionally, the brakes are not recommended for heavy duty towing but have the added advantage due to the extended wear.

Literature Review

Atkins, Anthony G., and M. P. Escudier. A dictionary of mechanical engineering. Oxford: Oxford University Press, 2013. Print. The book acted as mechanical dictionary that provided access to the brake rotor, discs, and various inputs that can be used in their production.

Beer, David F., and David A. McMurrey. A guide to writing as an engineer. Fourth ed. New York: John Wiley & Sons, 2013. Print. The book provided writing knowledge such as formats and citations of the report.

Sutcliffe, Steve. " Are carbon ceramic brakes a rip off. The article is from autocar. co. uk and has assisted in presenting information on carbon ceramic brakes, their merits and demerits.

Haj-Assaad, Sami. " Why You Should, Or Shouldnt, Upgrade to Carbon Ceramic Brakes." The article is from AutoGuide. com and provides both customers and engineers with in-depth knowledge on the ceramic brakes.

Theory, Method, Procedure, and Equipment

The features of the brake pads were analyzed, and lab tests were carried out to prove the provided information. Additionally, an examination of consumer ratings provided verification on the mechanical characteristics of the brake pads. Tests revealed that the metallic brake pads had a short lifespan due to the excess strength it provided when the vehicle braked. The strength factor made it recommended for high duty machinery. Other non-mechanical factors such as noise and dust prevention rated the ceramic brake pads at the top with a longer life due to the less energy produced during stopping. Observable and other customer related features have been presented in the diagrams below.

Diagram 1 Viking Metallica
Diagram 2. Viking Ceramo ST

Table 1: comparison of Viking Metallica and Viking Ceramo ST break pads

Type of break pad

Cost

Warranty

Consumer ratings

Ceramic

57. 95

90 days

4. 5 stars

Metallic

43. 95

Lifetime

3. 5 Stars

Conclusions

Based on the provided information, the team came up with a conclusion that the metallic pads had a better performance than the ceramic ones. The metallic pads are more aggressive and can last a long time without replacement. They also ensure the management of the rotor due to contractions leaving it to cool and preventing wearing. The metallic pads are best suitable for heavy machinery that requires fast responding brakes.

Ceramic pads, on the other hand, are suitable for average car owners. They make less noise, transfer heat from rotors and lead to less brake fade.

Customers, have top ranked these pads despite their high prices. The report also concluded that the high prices were as due to added ceramic compounds on the brake pads (The Brembo Group).

Implications and Further Research

The report suggested review on the cons of both brake pads to ensure efficiency in the future. Future researches highlighted the adoption of advanced technologies in braking systems. It would include the use of carbon fiber composites in braking solutions that would last for long without wearing (Atkins, Anthony and Escudier 78). The advancements would also lead to decreased noise and dust that is prone to both brake pads. Finally, the research would also take into considerations other external issues that influence the performance of the brake pads. They include the weather

patterns, road conditions, temperatures at the rotor and individual driving styles that have direct influences on the success of the brake pads (Sutcliffe).

Works Cited

Atkins, Anthony G., and M. P. Escudier. A dictionary of mechanical engineering. Oxford: Oxford University Press, 2013. Print.

Beer, David F., and David A. McMurrey. A guide to writing as an engineer. Fourth ed. New York: John Wiley & Sons, 2013. Print.

Haj-Assaad, Sami. " Why You Should, Or Shouldnt, Upgrade to Carbon Ceramic Brakes." AutoGuidecom News Why You Should Or Shouldnt Upgrade to Carbon Ceramic Brakes Comments. N. p., 11 Oct. 2012. Web. 16 Oct. 2014. .

Sutcliffe, Steve. " Are carbon ceramic brakes a rip off?." Autocar. N. p., 11 Sept. 2012. Web. 16 Oct. 2014. .

The Brembo Group. " CARBON CERAMIC DISCS." CARBON CERAMIC DISCS. N. p., n. d. Web. 16 Oct. 2014. .