

ABSTRAK

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Judul : **ANALISIS PERBANDINGAN SIFAT MEKANIS *GEAR KICK STATER* ORISINIL DAN MEREK X PADA SEPEDA MOTOR VESPA.**

Pada Sepeda Motor, *gear kick stater* berfungsi kinerja berhubungan dengan gigi kampak. Ketika gigi kampak diputar, *gear kick stater* berbenturan dengan *gear primer*, permukaan kontak dari *gear kick stater* dan *gear primer* memiliki alur spiral. Ketika *gear kick stater* berputar, maka *gear primer* bergerak secara aksial. Sehingga dapat menggerakkan gear-gear lainnya. Pada saat ini masyarakat, lebih selektif memilih komponen *gear kick stater* untuk sepeda motor vespa nya itu dikarenakan ada perbandingan harga dan kualitas. Maka dari itu tujuan penelitian ini dilakukan untuk mengetahui kekuatan bahan, komposisi kimia dan kekerasan *gear kick stater*. Dari pengujian hasil material *gear kick stater* orisinil dan merek x hasil ujian komposisi kimia di ketahui karbon C pada *gear kick stater* orisinil 0.192% pada *gear kick stater* merek x sebesar 0.172% selain itu unsur chromium (cr) pada *gear kick stater* orisinil 0.460% dan pada *gear kick stater* merek x 1.069% . Dari hasil metallografi pada *gear kick stater* orisinil dan merek x didapati fasa didominasi dengan ferit dan pearlit. Dari hasil uji kekerasan *gear kick stater* orisinil memiliki nilai sebesar 776,711 N/mm² dan *gear kick stater* merek x sebesar 673,474 N/mm².

Kata kunci : *gear kick stater*, komposisi kimia, kekerasan, struktur mikro

ABSTRACT

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Title : **COMPARATIVE ANALYSIS OF GEAR MECHANICAL PROPERTIES ORIGINAL AND BRAND X STICKER KICK ON VESPA MOTORCYCLE.**

On a motorcycle, the kick stater gear functions related to axle gear. When the axle gear is rotated, the kick starter gear collides with the primary gear, the contact surface of the kick starter gear and the primary gear has a spiral groove. When the kick starter gear rotates, the primary gear moves axially. So that it can move other gears. At this time the community, more selectively chose the kick stater gear component for its Vespa motorcycle because there was a comparison of price and quality. Therefore the purpose of this study was to determine the strength of the material, chemical composition and hardness of the kick gear. From the test results of the original kick gear starter material and brand x the chemical composition test results found in carbon C in the original kick starter gear 0.192% on the kick starter gear x 0.172% besides the chromium (cr) element on the original kick starter gear 0.460% and on the gear kick starter brand x 1,069%. From the results of metallography on the original kick gear starter and the brand x found the phase is dominated by ferrite and pearlite. From the results of the hardness test the original gear kick starter has a value of 673,474 mm and x brand kick gear starter is 776,711 mm.

Keywords: gear kick stater, chemical composition, hardness, microstructure