

**DEVELOPMENT DAN PEMBUATAN LIMITED SLIP DIFFERENTIAL
PADA GARDAN RWD MITSUBISHI LANCER SL SPESIFIKASI
DRIFTING**

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Abstrak

Drifting adalah teknik mengemudi dimana pengemudi berusaha membuat mobil melaju secara *sliding* dengan roda selalu mengalami *spin* selama mungkin mengikuti sirkuit. Balapan jenis ini merupakan balapan yang berpacu dengan kecepatan dan waktu. *Differential* yaitu salah satu sistem pemindah tenaga pada kendaraan yang berfungsi untuk meneruskan tenaga dari mesin ke roda kanan dan kiri. Komponen-komponen utama *differential* pada Mitsubishi Lancer SL adalah: roda gigi pinion (*drive pinion*), poros pinion (*pinion shaft*), roda gigi sisi (*side gear*), gigi pinion (*differential pinion*), roda gigi cincin (*ring gear*), *differential case*, bantalan-bantalan, perapat oli (*oil seal*) dan poros roda belakang. Cara kerja dari *differential* pada Mitsubishi Lancer SL adalah putaran poros engkol dari mesin dihubungkan ke transmisi kemudian diteruskan ke *differential* yang sebelumnya diperkecil tenaganya oleh poros *propeller* yang terhubung dengan *drive pinion* ke *ring gear* dan *differential case* yang kemudian memutar as roda belakang. *Development differential pantek* gardan (*lock differential*) adalah proses penguncian gardan dengan mematikan roda gigi di dalam *differential* sehingga putaran roda kanan dan roda kiri berputar secara bersamaan. Hasil dari *pantek* gardan (*lock differential*) yaitu untuk menambah responsif dari putaran mesin ke putaran roda belakang dan mempermudah roda mengalami *spin* ketika berbelok pada kecepatan tinggi. Pada pengujian *turning radius* didapatkan hasil sebelum *development* yaitu 5,5 meter dan setelah dilakukan *development* radius putarnya menjadi 6,4 meter karena efek dari *pantek* gardan.

Kata kunci : *Drifting, differential, development differential, hasil development*

**DEVELOPMENT AND MAKING LIMITED SLIP DIFFERENTIAL IN
GARDAN RWD OF MITSUBISHI LANCER SL SPECIFICATION
DRIFTING**

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ABSTRACT

Drifting is a driving technique where the driver tries to make the car go sliding by the wheel always experiences spin as long as possible following the circuit. This type of race is a race that races with speed and time. Differential is one of the power transfer systems in a vehicle that functions to carry power from the engine to the right and left wheels. The main differential components of the Mitsubishi Lancer SL are: pinion drive (pinion), pinion shaft (pinion shaft), side gears (side gear), pinion gear (differential pinion), ring gears (ring gear), differential case, bearings, oil seal and rear axle. The workings of the differential on the Mitsubishi Lancer SL are the rotation of the crankshaft from the engine connected to the transmission then forwarded to the differential previously reduced by the propeller shaft connected to the pinion drive to the gear ring and differential case which then rotates the rear axle. Development differential pantek axle (lock differential) is the process of locking the axle by turning off the gear in the differential so that the rotation of the right wheel and the left wheel rotate simultaneously. The results of the pantek axle (lock differential) are to add responsiveness from the engine rotation to the rear wheel rotation and make it easier for the wheel to spin when turning at high speed. The radius rotation test obtained results before the development of 5.5 meters and after the development the rotation radius was 6.4 meters due to the effect of the pantek axle.

Keywords: Drifting, differential, development differential, development results